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29 April 1963

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MILITARY STANDARD

SAMPLING PROCEDURES AND TABLES FOR INSPECTION BY ATTRIBUTES



MIL-STD-105D
29 APRIL 1963

DEPARTMENT OF DEFENSE
Washington 25, D. C.

SAMPLING PROCEDURES AND TABLES FOR INSPECTION BY ATTRIBUTES

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1. This standard has been approved by the Department of Defense and is mandatory for use by the Departments of the Army, the Navy, the Air Force and the Defense Supply Agency. This revision supersedes MIL-STD-105C, dated 18 July 1961.
2. This publication provides sampling procedures and reference tables for use in planning and conducting inspection by attributes. This publication was developed by a working group representing the military services of Canada, the United Kingdom and the United States of America with the assistance and cooperation of American and European organizations for quality control. The international designation of this document is ABC-STD-105. When revision or cancellation of this standard is proposed, the departmental custodians will inform their respective Departmental Standardization Office so that appropriate action may be taken respecting the international agreement concerned.
3. The U.S. Army Munitions Command is designated as preparing activity for this standard. Recommended corrections, additions, or deletions should be addressed to the Commanding Officer, U. S. Army CBR Engineering Office, Attn: SMUCE-ED-S, Army Chemical Center, Maryland.

MILITARY STANDARD

SAMPLING PROCEDURES AND TABLES FOR INSPECTION BY ATTRIBUTES

TO ALL ACTIVITIES:

1. The following corrections should be made to MIL-STD-105D:

(a) *Page ii*, lines 2, 3, and 4: Change to read "Recommended corrections, additions or deletions should be addressed to Director of Quality Assurance, U.S. Army Edgewood Arsenal, ATTN: SMUEA-QA-E, Edgewood Arsenal, Md., 21010."

(b) *Page 2*, paragraph 3.2, line 3: Change "hunderd" to read "hundred".

(c) *Page 4*, paragraph 6.4, line 9 Change "for" to read "only".

(d) *Page 5*, paragraph 8.2, line 5: Change "batchs" to read "batches".

(e) *Page 5*, paragraph 8.2, line 6: Change "require change" to read "require a change".

(f) *Page 5*, paragraph 8.2, lines 6, 7, and 8: Delete the sentence that reads, "The switching procedures given below require a change".

(g) *Page 7*, paragraph 10.1, lines 5 and 6: Change "10.1.3, 10.1.4, and 10.1.5" to read "10.1.3 and 10.1.4". Delete reference to 10.1.5.

(h) *Page 8*, paragraph 11.1, line 2: Change "larger then 80" to read "larger than 80".

(i) *Page 9*, table I: Add the following footnote beneath table I:

Note.

<i>Small sample inspection levels of MIL-STD-105C</i>	<i>Convert to these special inspection levels</i>
L-1 and L-2-----	S-1
L-3 and L-4-----	S-2
L-5 and L-6-----	S-3
L-7 and L-8-----	S-4

(j) *Page 29*, table IX, vertical scale on three charts: Change " $\frac{1}{2}n$, $\frac{1}{3}n$, $\frac{1}{4}n$ " to read ".75n, .50n, .25n".

(k) *Page 36*, table X-D-1: Add footnote, "Note: Binomial distribution used for percent defective computations; Poisson for defects per hundred units".

(l) *Page 46*, table X-J-1: Change footnote to read, "Note: Binomial distribution used for percent defective computations; Poisson for defects per hundred units".

(m) *Page 48*, table X-K-1: For $P_a=75.0$ and $AQL=0.65$, change "0.382" to read "1.382".

(n) *Page 52*, table X-M-1: In line below row of AQL values, change "dejects" to read "defects".

(o) *Page 54*, table X-N-1: In the footnote, change "Pisson" to read "Poisson".

(p) *Page 56*, table X-P-1: In the footnote, change "Poission" to read "Poisson".

(q) *Page 63*, for the term Reduced inspection: Change paragraph references from "8.2 and 8.3.3" to read "8.2, 8.3.3 and 10.1.4".

(r) *Page 64*, mailing address for the U.S. Government Printing Office: Delete reference to zone 25 and, after D.C., add the ZIP code "20402".

2. The following is a cumulative list of earlier changes: Notice 1 (Navy) dated 1 November 1963 provided a table of conversion from the small sample inspection levels (L-1, L-2, etc.) of MIL-STD-105C, to the special inspection levels (S-1, etc.) of MIL-STD-105D. The same conversion information is covered by correction 1(i) above to page 9, table I.

3. Retain this notice and insert before the table of contents.

4. Holders of MIL-STD-105D will verify that corrections indicated above have been entered and will destroy the previous notice. Activities which stock these notices for issue are warned that each notice, together with its appended revised pages if any, is in effect a separate publication to be retained until the military standard is completely revised or canceled.

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SAMPLING PROCEDURES AND TABLES

FOR INSPECTION BY ATTRIBUTES

1. SCOPE

1.1 PURPOSE. This publication establishes sampling plans and procedures for inspection by attributes. When specified by the responsible authority, this publication shall be referenced in the specification, contract, inspection instructions, or other documents and the provisions set forth herein shall govern. The "responsible authority" shall be designated in one of the above documents.

1.2 APPLICATION. Sampling plans designated in this publication are applicable, but not limited, to inspection of the following:

- a. End items.
- b. Components and raw materials.
- c. Operations.
- d. Materials in process.
- e. Supplies in storage.
- f. Maintenance operations.
- g. Data or records.
- h. Administrative procedures.

These plans are intended primarily to be used for a continuing series of lots or batches.

The plans may also be used for the inspection of isolated lots or batches, but, in this latter case, the user is cautioned to consult the operating characteristic curves to find a plan which will yield the desired protection (see 11.6).

1.3 INSPECTION. Inspection is the process of measuring, examining, testing, or otherwise comparing the unit of product (see 1.5) with the requirements.

1.4 INSPECTION BY ATTRIBUTES. Inspection by attributes is inspection whereby either the unit of product is classified simply as defective or nondefective, or the number of defects in the unit of product is counted, with respect to a given requirement or set of requirements.

1.5 UNIT OF PRODUCT. The unit of product is the thing inspected in order to determine its classification as defective or nondefective or to count the number of defects. It may be a single article, a pair, a set, a length, an area, an operation, a volume, a component of an end product, or the end product itself. The unit of product may or may not be the same as the unit of purchase, supply, production, or shipment.

2. CLASSIFICATION OF DEFECTS AND DEFECTIVES

2.1 METHOD OF CLASSIFYING DEFECTS.

A classification of defects is the enumeration of possible defects of the unit of product classified according to their seriousness. A defect is any nonconformance of the unit of product with specified requirements. Defects will normally be grouped into one or more of the following classes; however, defects may be grouped into other classes, or into subclasses within these classes.

2.1.1 CRITICAL DEFECT. A critical defect is a defect that judgment and experience indicate is likely to result in hazardous or unsafe conditions for individuals using, maintaining, or depending upon the product; or a defect that judgment and experience indicate is likely to prevent performance of the tactical function of a major end item such as a ship, aircraft, tank, missile or space vehicle. NOTE: For a special provision relating to critical defects, see 6.3.

2.1.2 MAJOR DEFECT. A major defect is a defect, other than critical, that is likely to result in failure, or to reduce materially the usability of the unit of product for its intended purpose.

2.1.3 MINOR DEFECT. A minor defect is a defect that is not likely to reduce materially the usability of the unit of product for its intended purpose, or is a departure from established standards having little bearing on the effective use or operation of the unit.

2.2 METHOD OF CLASSIFYING DEFECTIVES. A defective is a unit of product which contains one or more defects. Defectives will usually be classified as follows:

2.2.1 CRITICAL DEFECTIVE. A critical defective contains one or more critical defects and may also contain major and or minor defects. NOTE: For a special provision relating to critical defectives, see 6.3.

2.2.2 MAJOR DEFECTIVE. A major defective contains one or more major defects, and may also contain minor defects but contains no critical defect.

2.2.3 MINOR DEFECTIVE. A minor defective contains one or more minor defects but contains no critical or major defect.

3. PERCENT DEFECTIVE AND DEFECTS PER HUNDRED UNITS

3.1 EXPRESSION OF NONCONFORMANCE. The extent of nonconformance of product shall be expressed either in terms of percent defective or in terms of defects per hundred units.

3.2 PERCENT DEFECTIVE. The percent defective of any given quantity of units of product is one hundred times the number of defective units of product contained therein divided by the total number of units of product, i.e.:

$$\text{Percent defective} = \frac{\text{Number of defectives}}{\text{Number of units inspected}} \times 100$$

3.3 DEFECTS PER HUNDRED UNITS. The number of defects per hundred units of any given quantity of units of product is one hundred times the number of defects contained therein (one or more defects being possible in any unit of product) divided by the total number of units of product, i.e.:

$$\text{Defects per hundred units} = \frac{\text{Number of defects}}{\text{Number of units inspected}} \times 100$$

4. ACCEPTABLE QUALITY LEVEL (AQL)

4.1 USE. The AQL, together with the Sample Size Code Letter, is used for indexing the sampling plans provided herein.

4.2 DEFINITION. The AQL is the maximum percent defective (or the maximum number of defects per hundred units) that, for purposes of sampling inspection, can be considered satisfactory as a process average (see 11.2).

4.3 NOTE ON THE MEANING OF AQL. When a consumer designates some specific value of AQL for a certain defect or group of defects, he indicates to the supplier that his (the consumer's) acceptance sampling plan will accept the great majority of the lots or batches that the supplier submits, provided the process average level of percent defective (or defects per hundred units) in these lots or batches be no greater than the designated value of AQL. Thus, the AQL is a designated value of percent defective (or defects per hundred units) that the consumer indicates will be accepted most of the time by the acceptance sampling procedure to be used. The sampling plans provided herein are so arranged that the probability of acceptance at the designated AQL value depends upon the sample size, being generally higher for large samples than for small ones, for a given AQL. The AQL alone does not

describe the protection to the consumer for individual lots or batches but more directly relates to what might be expected from a series of lots or batches, provided the steps indicated in this publication are taken. It is necessary to refer to the operating characteristic curve of the plan, to determine what protection the consumer will have.

4.4 LIMITATION. The designation of an AQL shall not imply that the supplier has the right to supply knowingly any defective unit of product.

4.5 SPECIFYING AQLs. The AQL to be used will be designated in the contract or by the responsible authority. Different AQLs may be designated for groups of defects considered collectively, or for individual defects. An AQL for a group of defects may be designated in addition to AQLs for individual defects, or subgroups, within that group. AQL values of 10.0 or less may be expressed either in percent defective or in defects per hundred units; those over 10.0 shall be expressed in defects per hundred units only.

4.6 PREFERRED AQLs. The values of AQLs given in these tables are known as preferred AQLs. If, for any product, an AQL be designated other than a preferred AQL, these tables are not applicable.

5. SUBMISSION OF PRODUCT

5.1 LOT OR BATCH. The term lot or batch shall mean "inspection lot" or "inspection batch," i.e., a collection of units of product from which a sample is to be drawn and inspected to determine conformance with the acceptability criteria, and may differ from a collection of units designated as a lot or batch

for other purposes (e.g., production, shipment, etc.).

5.2 FORMATION OF LOTS OR BATCHES. The product shall be assembled into identifiable lots, sublots, batches, or in such other manner as may be prescribed (see 5.4). Each lot or batch shall, as far as is practicable,

5. SUBMISSION OF PRODUCT (Continued)

consist of units of product of a single type, grade, class, size, and composition, manufactured under essentially the same conditions, and at essentially the same time.

5.3 LOT OR BATCH SIZE. The lot or batch size is the number of units of product in a lot or batch.

5.4 PRESENTATION OF LOTS OR BATCHES. The formation of the lots or

batches, lot or batch size, and the manner in which each lot or batch is to be presented and identified by the supplier shall be designated or approved by the responsible authority. As necessary, the supplier shall provide adequate and suitable storage space for each lot or batch, equipment needed for proper identification and presentation, and personnel for all handling of product required for drawing of samples.

6. ACCEPTANCE AND REJECTION

6.1 ACCEPTABILITY OF LOTS OR BATCHES. Acceptability of a lot or batch will be determined by the use of a sampling plan or plans associated with the designated AQL or AQLs.

6.2 DEFECTIVE UNITS. The right is reserved to reject any unit of product found defective during inspection whether that unit of product forms part of a sample or not, and whether the lot or batch as a whole is accepted or rejected. Rejected units may be repaired or corrected and resubmitted for inspection with the approval of, and in the manner specified by, the responsible authority.

6.3 SPECIAL RESERVATION FOR CRITICAL DEFECTS. The supplier may be required at the discretion of the responsible authority to inspect every unit of the lot or batch for

critical defects. The right is reserved to inspect every unit submitted by the supplier for critical defects, and to reject the lot or batch immediately, when a critical defect is found. The right is reserved also to sample, for critical defects, every lot or batch submitted by the supplier and to reject any lot or batch if a sample drawn therefrom is found to contain one or more critical defects.

6.4 RESUBMITTED LOTS OR BATCHES. Lots or batches found unacceptable shall be resubmitted for reinspection only after all units are re-examined or retested and all defective units are removed or defects corrected. The responsible authority shall determine whether normal or tightened inspection shall be used, and whether reinspection shall include all types or classes of defects or for the particular types or classes of defects which caused initial rejection.

7. DRAWING OF SAMPLES

7.1 SAMPLE. A sample consists of one or more units of product drawn from a lot or batch, the units of the sample being selected at random without regard to their quality. The number of units of product in the sample is the sample size.

7.2 REPRESENTATIVE SAMPLING. When appropriate, the number of units in the sample shall be selected in proportion to the size of sublots or subbatches, or parts of the lot or batch, identified by some rational criterion.

7. DRAWING OF SAMPLES (Continued)

When representative sampling is used, the units from each part of the lot or batch shall be selected at random.

7.3 TIME OF SAMPLING. Samples may be drawn after all the units comprising the lot or batch have been assembled, or sam-

ples may be drawn during assembly of the lot or batch.

7.4 DOUBLE OR MULTIPLE SAMPLING.

When double or multiple sampling is to be used, each sample shall be selected over the entire lot or batch.

8. NORMAL, TIGHTENED AND REDUCED INSPECTION

8.1 INITIATION OF INSPECTION. Normal inspection will be used at the start of inspection unless otherwise directed by the responsible authority.

8.2 CONTINUATION OF INSPECTION. Normal, tightened or reduced inspection shall continue unchanged for each class of defects or defectives on successive lots or batches except where the switching procedures given below require change. The switching procedures given below require a change. The switching procedures shall be applied to each class of defects or defectives independently.

8.3 SWITCHING PROCEDURES.

8.3.1 NORMAL TO TIGHTENED. When normal inspection is in effect, tightened inspection shall be instituted when 2 out of 5 consecutive lots or batches have been rejected on original inspection (i.e., ignoring resubmitted lots or batches for this procedure).

8.3.2 TIGHTENED TO NORMAL. When tightened inspection is in effect, normal inspection shall be instituted when 5 consecutive lots or batches have been considered acceptable on original inspection.

8.3.3 NORMAL TO REDUCED. When normal inspection is in effect, reduced inspection shall be instituted providing that all of the following conditions are satisfied:

a. The preceding 10 lots or batches (or more, as indicated by the note to Table VIII) have been on normal inspection and none has been rejected on original inspection; and

b. The total number of defectives (or defects) in the samples from the preceding 10 lots or batches (or such other number as was used for condition "a" above) is equal to or less than the applicable number given in Table VIII. If double or multiple sampling is in use, all samples inspected should be included, not "first" samples only; and

c. Production is at a steady rate; and

d. Reduced inspection is considered desirable by the responsible authority.

8.3.4 REDUCED TO NORMAL. When reduced inspection is in effect, normal inspection shall be instituted if any of the following occur on original inspection:

a. A lot or batch is rejected; or

b. A lot or batch is considered acceptable under the procedures of 10.1.4; or

c. Production becomes irregular or delayed; or

d. Other conditions warrant that normal inspection shall be instituted.

8.4 DISCONTINUATION OF INSPECTION.

In the event that 10 consecutive lots or batches remain on tightened inspection (or such other number as may be designated by the responsible authority), inspection under the provisions of this document should be discontinued pending action to improve the quality of submitted material.

9. SAMPLING PLANS

9.1 SAMPLING PLAN. A sampling plan indicates the number of units of product from each lot or batch which are to be inspected (sample size or series of sample sizes) and the criteria for determining the acceptability of the lot or batch (acceptance and rejection numbers).

9.2 INSPECTION LEVEL. The inspection level determines the relationship between the lot or batch size and the sample size. The inspection level to be used for any particular requirement will be prescribed by the responsible authority. Three inspection levels: I, II, and III, are given in Table I for general use. Unless otherwise specified, Inspection Level II will be used. However, Inspection Level I may be specified when less discrimination is needed, or Level III may be specified for greater discrimination. Four additional special levels: S-1, S-2, S-3 and S-4, are given in the same table and may be used where relatively small sample sizes are necessary and large sampling risks can or must be tolerated.

NOTE: In the designation of inspection levels S-1 to S-4, care must be exercised to avoid AQLs inconsistent with these inspection levels.

9.3 CODE LETTERS. Sample sizes are designated by code letters. Table I shall be used to find the applicable code letter for the particular lot or batch size and the prescribed inspection level.

9.4 OBTAINING SAMPLING PLAN. The AQL and the code letter shall be used to ob-

tain the sampling plan from Tables II, III or IV. When no sampling plan is available for a given combination of AQL and code letter, the tables direct the user to a different letter. The sample size to be used is given by the new code letter not by the original letter. If this procedure leads to different sample sizes for different classes of defects, the code letter corresponding to the largest sample size derived may be used for all classes of defects when designated or approved by the responsible authority. As an alternative to a single sampling plan with an acceptance number of 0, the plan with an acceptance number of 1 with its correspondingly larger sample size for a designated AQL (where available), may be used when designated or approved by the responsible authority.

9.5 TYPES OF SAMPLING PLANS. Three types of sampling plans: Single, Double and Multiple, are given in Tables II, III and IV, respectively. When several types of plans are available for a given AQL and code letter, any one may be used. A decision as to type of plan, either single, double, or multiple, when available for a given AQL and code letter, will usually be based upon the comparison between the administrative difficulty and the average sample sizes of the available plans. The average sample size of multiple plans is less than for double (except in the case corresponding to single acceptance number 1) and both of these are always less than a single sample size. Usually the administrative difficulty for single sampling and the cost per unit of the sample are less than for double or multiple.

10. DETERMINATION OF ACCEPTABILITY

10.1 PERCENT DEFECTIVE INSPECTION.

To determine acceptability of a lot or batch under percent defective inspection, the applicable sampling plan shall be used in accordance with 10.1.1, 10.1.2, 10.1.3, 10.1.4, and 10.1.5.

10.1.1 SINGLE SAMPLING PLAN. The number of sample units inspected shall be equal to the sample size given by the plan. If the number of defectives found in the sample is equal to or less than the acceptance number, the lot or batch shall be considered acceptable. If the number of defectives is equal to or greater than the rejection number, the lot or batch shall be rejected.

10.1.2 DOUBLE SAMPLING PLAN. The number of sample units inspected shall be equal to the first sample size given by the plan. If the number of defectives found in the first sample is equal to or less than the first acceptance number, the lot or batch shall be considered acceptable. If the number of defectives found in the first sample is equal to or greater than the first rejection number, the lot or batch shall be rejected. If the number of defectives found in the first sample is between the first acceptance and rejection numbers, a second sample of the size given by the plan shall be inspected. The

number of defectives found in the first and second samples shall be accumulated. If the cumulative number of defectives is equal to or less than the second acceptance number, the lot or batch shall be considered acceptable. If the cumulative number of defectives is equal to or greater than the second rejection number, the lot or batch shall be rejected.

10.1.3 MULTIPLE SAMPLE PLAN. Under multiple sampling, the procedure shall be similar to that specified in 10.1.2, except that the number of successive samples required to reach a decision may be more than two.

10.1.4 SPECIAL PROCEDURE FOR REDUCED INSPECTION. Under reduced inspection, the sampling procedure may terminate without either acceptance or rejection criteria having been met. In these circumstances, the lot or batch will be considered acceptable, but normal inspection will be reinstated starting with the next lot or batch (see 8.3.4 (b)).

10.2 DEFECTS PER HUNDRED UNITS INSPECTION. To determine the acceptability of a lot or batch under Defects per Hundred Units inspection, the procedure specified for Percent Defective inspection above shall be used, except that the word "defects" shall be substituted for "defectives."

11. SUPPLEMENTARY INFORMATION

11.1 OPERATING CHARACTERISTIC CURVES. The operating characteristic curves for normal inspection, shown in Table X (pages 30-62), indicate the percentage of lots or batches which may be expected to be accepted under the various sampling plans for a given process quality. The curves shown are for single sampling; curves for double

and multiple sampling are matched as closely as practicable. The O. C. curves shown for AQLs greater than 10.0 are based on the Poisson distribution and are applicable for defects per hundred units inspection; those for AQLs of 10.0 or less and sample sizes of 80 or less are based on the binomial distribution and are applicable for percent defect-

11. SUPPLEMENTARY INFORMATION (Continued)

tive inspection; those for AQLs of 10.0 or less and sample sizes larger than 80 are based on the Poisson distribution and are applicable either for defects per hundred units inspection, or for percent defective inspection (the Poisson distribution being an adequate approximation to the binomial distribution under these conditions). Tabulated values, corresponding to selected values of probabilities of acceptance (P_a , in percent) are given for each of the curves shown, and, in addition, for tightened inspection, and for defects per hundred units for AQLs of 10.0 or less and sample sizes of 80 or less.

11.2 PROCESS AVERAGE. The process average is the average percent defective or average number of defects per hundred units (whichever is applicable) of product submitted by the supplier for original inspection. Original inspection is the first inspection of a particular quantity of product as distinguished from the inspection of product which has been resubmitted after prior rejection.

11.3 AVERAGE OUTGOING QUALITY (AOQ). The AOQ is the average quality of outgoing product including all accepted lots or batches, plus all rejected lots or batches after the rejected lots or batches have been effectively 100 percent inspected and all defectives replaced by nondefectives.

11.4 AVERAGE OUTGOING QUALITY LIMIT (AOQL). The AOQL is the maximum of the AOQs for all possible incoming qualities for a given acceptance sampling plan. AOQL values are given in Table V-A for each of the single sampling plans for normal inspection and in Table V-B for each of the single sampling plans for tightened inspection.

11.5 AVERAGE SAMPLE SIZE CURVES. Average sample size curves for double and multiple sampling are in Table IX. These show the average sample sizes which may be expected to occur under the various sampling plans for a given process quality. The curves assume no curtailment of inspection and are approximate to the extent that they are based upon the Poisson distribution, and that the sample sizes for double and multiple sampling are assumed to be $0.631n$ and $0.25n$ respectively, where n is the equivalent single sample size.

11.6 LIMITING QUALITY PROTECTION. The sampling plans and associated procedures given in this publication were designed for use where the units of product are produced in a continuing series of lots or batches over a period of time. However, if the lot or batch is of an isolated nature, it is desirable to limit the selection of sampling plans to those, associated with a designated AQL value, that provide not less than a specified limiting quality protection. Sampling plans for this purpose can be selected by choosing a Limiting Quality (LQ) and a consumer's risk to be associated with it. Tables VI and VII give values of LQ for the commonly used consumer's risks of 10 percent and 5 percent respectively. If a different value of consumer's risk is required, the O.C. curves and their tabulated values may be used. The concept of LQ may also be useful in specifying the AQL and Inspection Levels for a series of lots or batches, thus fixing minimum sample size where there is some reason for avoiding (with more than a given consumer's risk) more than a limiting proportion of defectives (or defects) in any single lot or batch.

TABLE I—Sample size code letters

(See 9.2 and 9.3)

Lot or batch size	Special inspection levels				General inspection levels		
	S-1	S-2	S-3	S-4	I	II	III
2 to 8	A	A	A	A	A	A	B
9 to 15	A	A	A	A	A	B	C
16 to 25	A	A	B	B	B	C	D
26 to 50	A	B	B	C	C	D	E
51 to 90	B	B	C	C	C	E	F
91 to 150	B	B	C	D	D	F	G
151 to 280	B	C	D	E	E	G	H
281 to 500	B	C	D	E	F	H	J
501 to 1200	C	C	E	F	G	J	K
1201 to 3200	C	D	E	G	H	K	L
3201 to 10000	C	D	F	G	J	L	M
10001 to 35000	C	D	F	H	K	M	N
35001 to 150000	D	E	G	J	L	N	P
150001 to 500000	D	E	G	J	M	P	Q
500001 and over	D	E	H	K	N	Q	R

**SINGLE
NORMAL**

TABLE II-A—Single sampling plans for normal inspection (Master table)

(See 9.4 and 9.5)

Sample size code letter		Sample size	Acceptable Quality Levels (normal inspection)																										
			0.010	0.015	0.025	0.040	0.065	1.0	1.5	2.5	4.0	6.5	10	15	25	40	65	100	150	250	400	650	1000						
A	2		Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	
B	3																												
C	5																												
D	8																												
E	13																												
F	20																												
G	32																												
H	50																												
J	80																												
K	125																												
L	200																												
M	315																												
N	500																												
P	800																												
Q	1250																												
R	2000																												



 = Use first sampling plan below arrow. If sample size equals, or exceeds, lot or batch size, do 100 percent inspection.
 = Use first sampling plan above arrow.
 Ac = Acceptance number.
 Re = Rejection number.

TABLE II-C—Single sampling plans for reduced inspection (Master table)

(See 9.4 and 9.5)

Acceptable Quality Levels (reduced inspection)†																																	
Sample size code letter	Sample size	0.010		0.015		0.025		0.040		0.65		1.0		1.5		2.5		4.0		6.5		100		150		250		400		650		1000	
		Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re		
A	2	↑		↑		↑		↑		↑		↑		↑		↑		↑		↑		↑		↑		↑		↑		↑			
B	2	↑		↑		↑		↑		↑		↑		↑		↑		↑		↑		↑		↑		↑		↑		↑			
C	2	↑		↑		↑		↑		↑		↑		↑		↑		↑		↑		↑		↑		↑		↑		↑			
D	3	↑		↑		↑		↑		↑		↑		↑		↑		↑		↑		↑		↑		↑		↑		↑			
E	5	↑		↑		↑		↑		↑		↑		↑		↑		↑		↑		↑		↑		↑		↑		↑			
F	8	↑		↑		↑		↑		↑		↑		↑		↑		↑		↑		↑		↑		↑		↑		↑			
G	13	↑		↑		↑		↑		↑		↑		↑		↑		↑		↑		↑		↑		↑		↑		↑			
H	20	↑		↑		↑		↑		↑		↑		↑		↑		↑		↑		↑		↑		↑		↑		↑			
J	32	↑		↑		↑		↑		↑		↑		↑		↑		↑		↑		↑		↑		↑		↑		↑			
K	50	↑		↑		↑		↑		↑		↑		↑		↑		↑		↑		↑		↑		↑		↑		↑			
L	80	↑		↑		↑		↑		↑		↑		↑		↑		↑		↑		↑		↑		↑		↑		↑			
M	125	↑		↑		↑		↑		↑		↑		↑		↑		↑		↑		↑		↑		↑		↑		↑			
N	200	↑		↑		↑		↑		↑		↑		↑		↑		↑		↑		↑		↑		↑		↑		↑			
P	315	↑		↑		↑		↑		↑		↑		↑		↑		↑		↑		↑		↑		↑		↑		↑			
Q	500	↑		↑		↑		↑		↑		↑		↑		↑		↑		↑		↑		↑		↑		↑		↑			
R	800	↑		↑		↑		↑		↑		↑		↑		↑		↑		↑		↑		↑		↑		↑		↑			

Use first sampling plan below arrow. If sample size equals or exceeds lot or batch size, do 100 percent inspection.

Use first sampling plan above arrow.

Ac = Acceptance number.

Re = Rejection number.

† If the acceptance number has been exceeded, but the rejection number has not been reached, accept the lot, but reinstate normal inspection (see 10.1.4).

TABLE III-A—Double sampling plans for normal inspection (Master table)

(See 9.4 and 9.5)

Sample size code letter	Sample size	Cumulative sample size	Acceptable Quality Levels (normal inspection)															
			0.010	0.015	0.025	0.040	0.065	0.10	0.15	0.25	0.40	0.65	1.0	1.5	2.5	4.0	6.5	10
			Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re
A																		
B	First	2																
	Second	4																
C	First	3																
	Second	6																
D	First	5																
	Second	10																
E	First	8																
	Second	16																
F	First	13																
	Second	26																
G	First	20																
	Second	40																
H	First	32																
	Second	64																
J	First	50																
	Second	100																
K	First	80																
	Second	160																
L	First	125																
	Second	250																
M	First	200																
	Second	400																
N	First	315																
	Second	630																
P	First	500																
	Second	1000																
Q	First	800																
	Second	1600																
R	First	1250																
	Second	2500																

- Use first sampling plan below arrow. If sample size equals or exceeds lot or batch size, do 100 percent inspection.
- Use first sampling plan above arrow.
- Ac Acceptance number
- Re Rejection number
- Use corresponding single sampling plan (or alternatively, use double sampling plan below, where available).

DOUBLE
NORMAL

DOUBLE TIGHTENED

TABLE III-B—Double sampling plans for tightened inspection (Master table)

(See 9.4 and 9.5)

Acceptable Quality Levels (tightened inspection)																								
Sample size code letter		Sample size	Cumulative sample size	0.010	0.015	0.025	0.040	0.065	1.0	1.5	2.5	4.0	6.5	10	15	25	40	65	100	150	250	400	650	1000
A				Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac
B				First	2	2																		
B				Second	2	4																		
C				First	3	3																		
C				Second	3	6																		
D				First	5	5																		
D				Second	5	10																		
E				First	8	8																		
E				Second	8	16																		
F				First	13	13																		
F				Second	13	26																		
G				First	20	20																		
G				Second	20	40																		
H				First	32	32																		
H				Second	32	64																		
J				First	50	50																		
J				Second	50	100																		
K				First	80	80																		
K				Second	80	160																		
L				First	125	125																		
L				Second	125	250																		
M				First	200	200																		
M				Second	200	400																		
N				First	315	315																		
N				Second	315	630																		
P				First	500	500																		
P				Second	500	1000																		
Q				First	800	800																		
Q				Second	800	1600																		
R				First	1250	1250																		
R				Second	1250	2500																		
S				First	2000	2000																		
S				Second	2000	4000																		

= Use first sampling plan below arrow. If sample size equals or exceeds lot or batch size, do 100 percent inspection.
 = Use first sampling plan above arrow.
 Ac = Acceptance number
 Re = Rejection number
 . = Use corresponding single sampling plan (or, alternatively, use double sampling plan below, where available).

(Sec 9.4 and 9.5)

➡ = Use first sampling plan below arrow. If sample size equals or exceeds lot or batch size, do 100 percent inspection.

$\text{H} \quad \text{H} \quad \text{H} \quad \text{H}$


Use corresponding single sampling plan (or alternatively, use double sampling plan below, when available.)

^a If, after the second sample, the acceptance number has been exceeded, but the rejection number has not been reached, accept the lot, but reinspect normal inspection (see 10.1A).

MULTIPLE NORMAL

TABLE IV-A—Multiple sampling plans for normal inspection (Master table)

(See 9.4 and 9.5)

Sample size code letter		Sample size	Cumulative sample size	Acceptable quality levels (normal inspection)																							
				0.010	0.015	0.025	0.040	0.065	1.0	1.5	2.5	4.0	6.5	10	15	25	40	65	100	150	250	400	650	1000			
A	B	C		Ac	He	Ac	He	Ac	He	Ac	He	Ac	He	Ac	He	Ac	He	Ac	He	Ac	He	Ac	He	Ac	He		
D	First	2	2																								
	Second	2	4																								
	Third	2	6																								
	Fourth	2	8																								
	Fifth	2	10																								
	Sixth	2	12																								
	Seventh	2	14																								
E	First	3	3																								
	Second	3	6																								
	Third	3	9																								
	Fourth	3	12																								
	Fifth	3	15																								
	Sixth	3	18																								
	Seventh	3	21																								
F	First	5	5																								
	Second	5	10																								
	Third	5	15																								
	Fourth	5	20																								
	Fifth	5	25																								
	Sixth	5	30																								
	Seventh	5	35																								
G	First	8	8																								
	Second	8	16																								
	Third	8	24																								
	Fourth	8	32																								
	Fifth	8	40																								
	Sixth	8	48																								
	Seventh	8	56																								
H	First	13	13																								
	Second	13	26																								
	Third	13	39																								
	Fourth	13	52																								
	Fifth	13	65																								
	Sixth	13	78																								
	Seventh	13	91																								
I	First	20	20																								
	Second	20	40																								
	Third	20	60																								
	Fourth	20	80																								
	Fifth	20	100																								
	Sixth	20	120																								
	Seventh	20	140																								

Use first sampling plan below arrow (refer to continuation of table on following page, when necessary). If sample size equals or exceeds lot or batch size, do 100 percent inspection.
 Use first sampling plan above arrow.
 Ac Acceptance number.
 He Rejection number.
 Use corresponding single sampling plan (or alternatively, use multiple sampling plan below, where available).
 Use corresponding double sampling plan (or alternatively, use multiple sampling plan below, where available).
 Acceptance not permitted at this sample size.

TABLE IV-A—Multiple sampling plans for normal inspection (Master table)
(Continued)

(See 9.4 and 9.5)

			Acceptable Quality Levels (normal inspection)																										
Sample size code letter	Sample size	Cumulative sample size	0.010	0.015	0.025	0.040	0.065	1.0	1.5	2.5	4.0	6.5	10	15	25	40	65	100	150	250	400	650	1000						
K	First	32	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→					
	Second	64	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→						
	Third	96	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→						
	Fourth	128	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→						
	Fifth	160	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→						
	Sixth	192	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→						
	Seventh	224	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→						
L	First	50	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→						
	Second	100	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→						
	Third	150	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→						
	Fourth	200	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→						
	Fifth	250	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→						
	Sixth	300	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→						
	Seventh	350	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→						
M	First	80	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→						
	Second	160	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→						
	Third	240	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→						
	Fourth	320	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→						
	Fifth	400	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→						
	Sixth	480	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→						
	Seventh	560	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→						
N	First	125	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→						
	Second	250	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→						
	Third	375	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→						
	Fourth	500	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→						
	Fifth	625	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→						
	Sixth	750	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→						
	Seventh	875	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→						
P	First	200	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→						
	Second	400	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→						
	Third	600	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→						
	Fourth	800	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→						
	Fifth	1000	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→						
	Sixth	1200	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→						
	Seventh	1400	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→						
Q	First	315	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→						
	Second	630	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→						
	Third	945	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→						
	Fourth	1260	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→						
	Fifth	1575	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→						
	Sixth	1890	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→						
	Seventh	2205	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→						
R	First	500	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→						
	Second	1000	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→						
	Third	1500	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→						
	Fourth	2000	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→						
	Fifth	2500	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→						
	Sixth	3000	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→						
	Seventh	3500	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→						

* Use first sampling plan below arrow. If sample size equals or exceeds lot or batch size, do 100 percent inspection.
 * Use first sampling plan above arrow (refer to preceding page, when necessary).
 * Acceptance number.
 * Rejection number.
 * Use corresponding single sampling plan (or alternatively, use multiple plan below, where available).
 * Acceptance not permitted at this sample size.

**MULTIPLE
NORMAL**

TABLE IV.B—Multiple sampling plans for tightened inspection (Master table)

Use first sampling plan below arrow (refer to continuation of table on following page, when necessary). If sample size equals or exceeds lot or batch size, do 100 percent inspection.
 * Use first sampling plan above arrow.
 Acceptance number
 Rejection number
 Use corresponding single sampling plan (or alternatively, use multiple sampling plan below where available).
 Use corresponding double sampling plan (or alternatively, use multiple sampling plan below, where available).
 Acceptance not permitted at this sample size.

(See 9.4 and 9.5)

<input type="checkbox"/>	Use first sampling plan below arrow	If sample size equals or exceeds lot or batch size, do 100 percent inspection.
<input type="checkbox"/>	Use first sampling plan above arrow	(refer to preceding page, when necessary)
<input type="checkbox"/>	Acceptance number	
<input type="checkbox"/>	Rejection number	
<input type="checkbox"/>	Use corresponding single sampling plan (or alternatively, use multiple sampling plan below, where available).	
<input type="checkbox"/>	Acceptance not permitted at this sample size.	

Sample size code letter		Sample size	Cumulative sample size	Acceptable Quality Levels (reduced inspection) †																							
				0.010	0.015	0.025	0.40	0.65	1.0	1.5	2.5	4.0	6.5	10	15	25	40	65	100	150	250	400	650	1000			
A	First	2	2	Ac	He	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac			
	Second	2	2	Ac	He	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac			
	Third	2	2	Ac	He	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac			
	Fourth	2	2	Ac	He	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac			
	Fifth	2	2	Ac	He	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac			
B	First	2	2	Ac	He	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac			
	Second	2	2	Ac	He	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac			
	Third	2	2	Ac	He	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac			
	Fourth	2	2	Ac	He	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac			
	Fifth	2	2	Ac	He	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac			
C	First	2	2	Ac	He	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac			
	Second	2	2	Ac	He	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac			
	Third	2	2	Ac	He	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac			
	Fourth	2	2	Ac	He	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac			
	Fifth	2	2	Ac	He	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac			
D	First	2	2	Ac	He	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac			
	Second	2	2	Ac	He	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac			
	Third	2	2	Ac	He	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac			
	Fourth	2	2	Ac	He	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac			
	Fifth	2	2	Ac	He	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac			
E	First	2	2	Ac	He	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac			
	Second	2	2	Ac	He	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac			
	Third	2	2	Ac	He	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac			
	Fourth	2	2	Ac	He	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac			
	Fifth	2	2	Ac	He	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac			
F	First	2	2	Ac	He	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac			
	Second	2	2	Ac	He	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac			
	Third	2	2	Ac	He	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac			
	Fourth	2	2	Ac	He	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac			
	Fifth	2	2	Ac	He	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac			
G	First	3	3	Ac	He	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac			
	Second	3	3	Ac	He	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac			
	Third	3	3	Ac	He	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac			
	Fourth	3	3	Ac	He	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac			
	Fifth	3	3	Ac	He	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac			
H	First	5	5	Ac	He	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac			
	Second	5	5	Ac	He	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac			
	Third	5	5	Ac	He	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac			
	Fourth	5	5	Ac	He	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac			
	Fifth	5	5	Ac	He	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac			
I	First	8	8	Ac	He	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac			
	Second	8	8	Ac	He	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac			
	Third	8	8	Ac	He	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac			
	Fourth	8	8	Ac	He	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac			
	Fifth	8	8	Ac	He	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac			
J	First	13	13	Ac	He	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac			
	Second	13	13	Ac	He	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac			
	Third	13	13	Ac	He	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac			
	Fourth	13	13	Ac	He	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac			
	Fifth	13	13	Ac	He	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac			
K	First	26	26	Ac	He	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac			
	Second	26	26	Ac	He	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac			
	Third	26	26	Ac	He	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac			
	Fourth	26	26	Ac	He	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac			
	Fifth	26	26	Ac	He	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac			

➡ = Use first sampling plan below arrow (refer to continuation of table on following page, when necessary). If sample size equals, or exceeds lot or batch size, do 100 percent inspection.

⇒ Use first sampling plan above arrow.

Ac = Acceptance number

Re = Rejection number.

- Use corresponding single sampling plan (or alternatively, use multiple sampling plan below, where available).

== Use corresponding double sampling plan (or alternatively, use multiple sampling plan below, where available).

== Acceptance not permitted at this sample size.

== If, after the final sample, the acceptance number has been exceeded, but the rejection number has not been reached, accept the lot but reinstate normal inspection (see 10.1.4).

(See 9.4 and 9.5)

Use first sampling plan below arrow. If sample size equals, or exceeds, lot or batch size, do 100 percent inspection.
Use first sampling plan above arrow (refer to preceding page when necessary).

Rejection number
Acceptance not permitted at this sample size.

Acceptance not permitted at this sample size.

TABLE V-B—Average Outgoing Quality Limit Factors for Tightened Inspection (Single sampling)

(See 11.4)

Code letter	Sample size	Acceptable Quality Level																										
		0.010	0.015	0.025	0.040	0.065	1.0	1.5	2.5	4.0	6.5	10	15	25	40	65	100	150	250	400	650	1000						
A	2																											
B	3																											
C	5																											
D	8																											
E	13																											
F	20																											
G	32																											
H	50																											
J	80																											
K	125																											
L	200																											
M	315																											
N	500																											
P	800																											
Q	1250																											
R	2000																											
S	3150																											

Note: For the exact AOQL, the above values must be multiplied by $(1 - \frac{\text{Sample size}}{\text{Lot or Batch size}})$ (see 11.4)

TABLE VI-A — Limiting Quality (in percent defective) for which $P_a = 10$ Percent
(for Normal Inspection, Single sampling)

(See 11.6)

		Acceptable Quality Level															
		0.010	0.015	0.025	0.040	0.065	0.10	0.15	0.25	0.40	0.65	1.0	1.5	2.5	4.0	6.5	10
A	2										16	25	37	54	68	58	
B	3																
C	5																
D	8									11	7.6	12	16	27	41	54	
E	13																
F	20																
G	32									4.8	7.6	10	13	18	22	29	
H	50																
J	80																
K	125						1.8			3.1	4.3	5.4	7.4	9.4	12	16	23
L	200																
M	315																
N	500	0.18	0.29	0.46	0.73	1.2	0.78	1.1	1.3	1.9	2.4	3.1	4.0	5.6			
P	800																
Q	1250																
R	2000		0.20	0.27	0.33	0.46	0.59	0.77	1.0	1.4							

LQ (DEFECTIVES)
10.0%

TABLE VI-B—Limiting Quality (in defects per hundred units) for which $P_a = 10$ Percent
(for Normal Inspection, Single sampling)

(See 11.6)

Code letter	Sample size	Acceptable Quality Level															
		0.010	0.015	0.025	0.040	0.065	0.10	0.15	0.25	0.40	0.65	1.0	1.5	2.5	4.0	6.5	10
A	2																
B	3																
C	5																
D	8																
E	13																
F	20																
G	32																
H	50																
J	80																
K	125																
L	200																
M	315																
N	500																
P	800																
Q	1250																
R	2000																

TABLE VII-A—Limiting Quality (in percent defective) for which $P_a = 5$ Percent
(for Normal Inspection, Single sampling)

(See 11.6)

Acceptable Quality Level																	
Code letter	Sample size	0.010	0.015	0.025	0.040	0.065	0.10	0.15	0.25	0.40	0.65	1.0	1.5	2.5	4.0	6.5	10
A	2																
B	3																
C	5																
D	8																
E	13																
F	20																
G	32																
H	50																
J	80																
K	125																
L	200																
M	315																
N	500																
P	800																
Q	1250																
R	2000																

LQ (DEFECTIVES)
5.0%

TABLE VII-B—Limiting Quality (in defects per hundred units) for which $P_a = 5$ Percent
(for Normal Inspection, Single sampling)

(See 11.6)

Code letter	Sample size	Acceptable Quality Level																							
		0.010	0.015	0.025	0.040	0.065	1.0	1.5	2.5	4.0	6.5	10	15	25	40	65	100	150	250	400	650	1000			
A	2																								
B	3																								
C	5																								
D	8																								
E	13																								
F	20																								
G	32																								
H	50																								
J	80																								
K	125																								
L	200																								
M	315																								
N	500																								
P	800																								
Q	1250																								
R	2000																								

TABLE VIII — Limit Numbers for Reduced Inspection

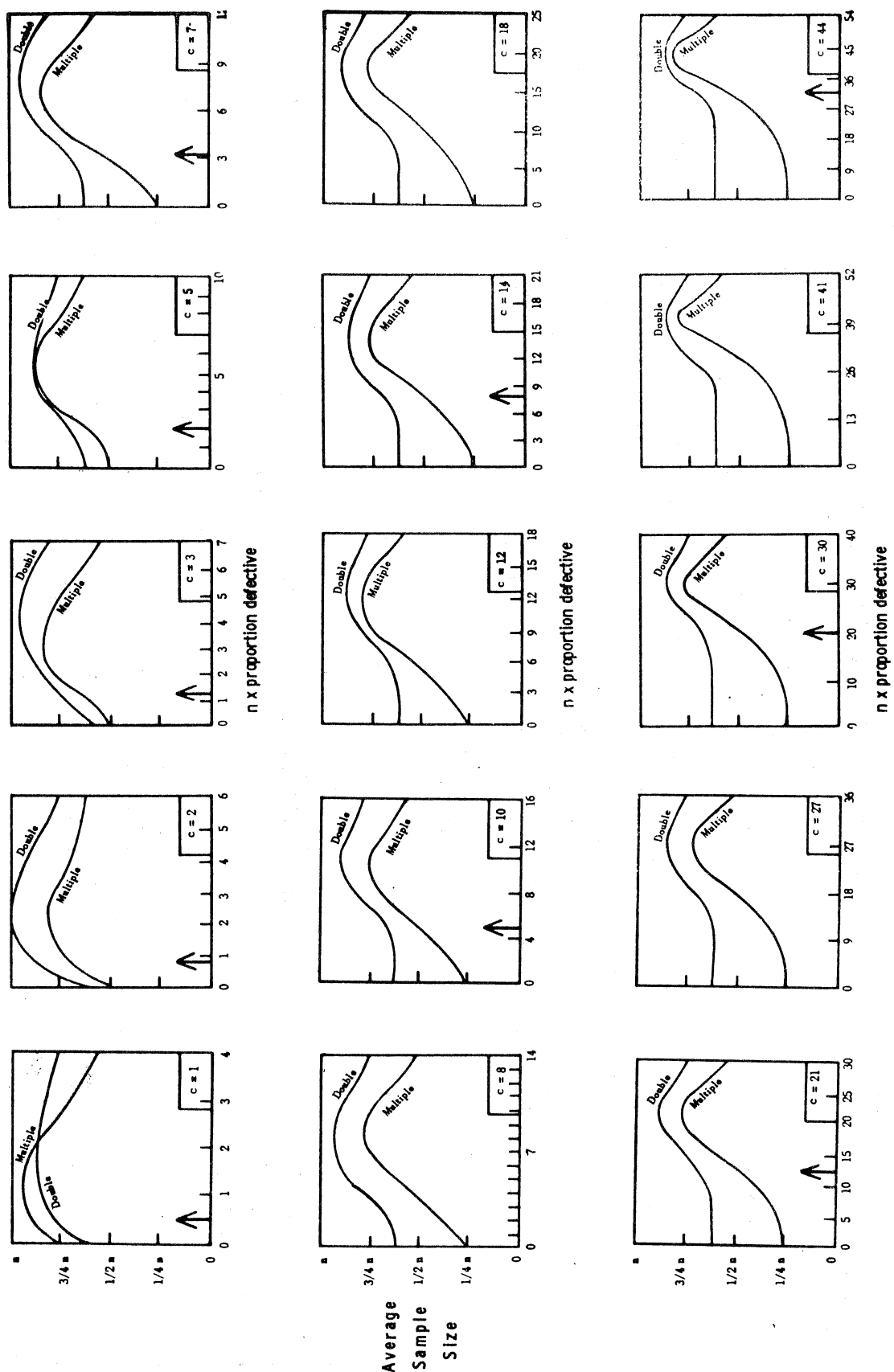
(See 8.3.3)

Number of sample units from last 10 lots or batches	Acceptable Quality Level															
	0.010	0.015	0.025	0.040	0.065	0.10	0.15	0.25	0.40	0.65	1.0	1.5	2.5	4.0	6.5	10
20 - 29	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
30 - 49	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
50 - 79	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
80 - 129	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
130 - 199	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
200 - 319	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
320 - 499	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
500 - 799	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
800 - 1249	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
1250 - 1999	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
2000 - 3149	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
3150 - 4999	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
5000 - 7999	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
8000 - 12499	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
12500 - 19999	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
20000 - 31499	0	0	2	4	8	14	22	40	68	115	181	297	490	777	1155	1811
31500 - 49999	0	1	4	8	14	24	38	67	111	186	301	471	727	1105	1777	2777
50000 & Over	2	3	7	14	25	40	63	110	181	301	471	727	1105	1777	2777	4277

Denotes that the number of sample units from the last ten lots or batches is not sufficient for reduced inspection for this AQL. In this instance more than ten lots or batches may be used for the calculation, provided that the lots or batches used are the most recent ones in sequence, that they have all been on normal inspection, and that none has been rejected while on original inspection.

TABLE IX—Average sample size curves for double and multiple sampling
(normal and tightened inspection)

(See 11.5)



n = Equivalent single sample size
 c = Single sample acceptance number
 \uparrow = AQL for normal inspection

A

PERCENT OF LOTS
EXPECTED TO BE
ACCEPTED (P_a)

30

Note: Binomial distribution used for percent defective computations; Poisson for defects per hundred units.

TABLE X-A-2 - SAMPLING PLANS FOR SAMPLE SIZE CODE LETTER: A

Type of sampling plan	Cumulative sample size	Acceptable Quality Levels (normal inspection)																		Cumulative sample size													
Single	2	▽	0	1	Use Letter D	Use Letter C	Use Letter B	1	2	2	3	3	4	5	6	7	8	8	9	10	11	12	13	14	15	18	19	21	22	27	28	30	31
Double		▽	*					(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	
Multiple		▽	*					*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
		Less than 10	X	10	15	25	40	65	100	150	X	250	400	X	650	X	1000	X	1000	X	650	X	400	X	650	X	1000	X	1000	X	1000		
Acceptable Quality Levels (tightened inspection)																																	

- ▽ = Use next subsequent sample size code letter for which acceptance and rejection numbers are available.
 Ac = Acceptance number
 Re = Rejection number
 * = Use single sampling plan above (or alternatively use letter D)
 (*) = Use single sampling (or alternatively use letter B).

TABLE X-B—Tables for sample size code letter: B

CHART B - OPERATING CHARACTERISTIC CURVES FOR SINGLE SAMPLING PLANS

(Curves for double and multiple sampling are matched as closely as practicable)

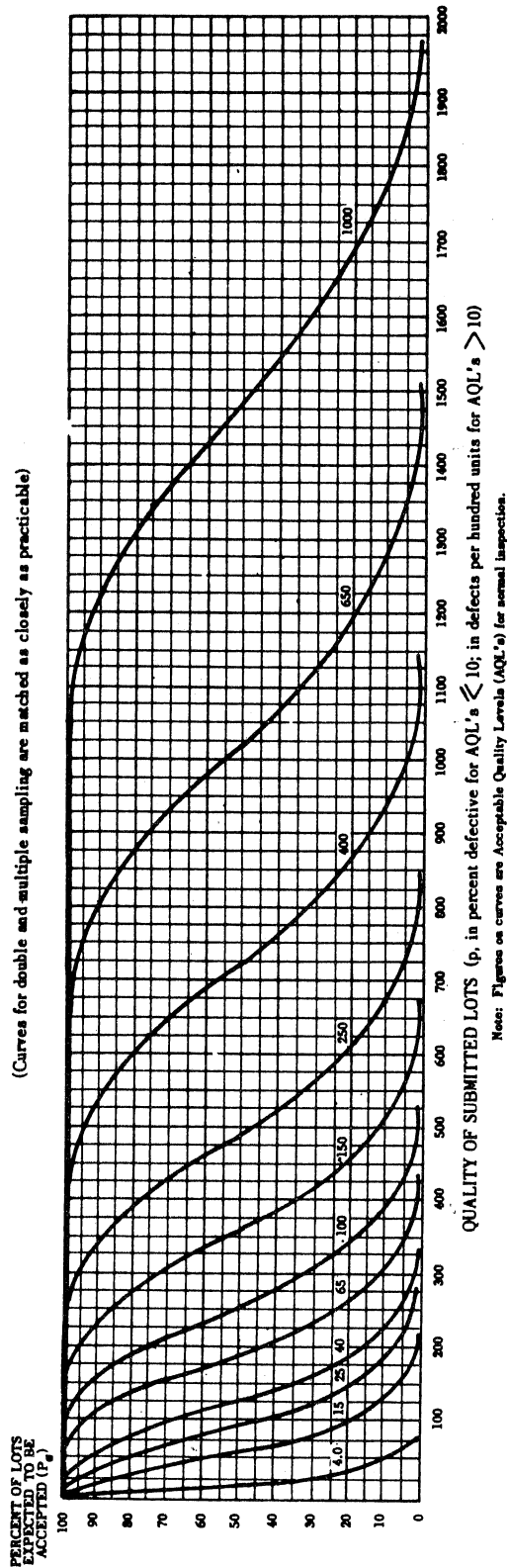


TABLE X-B-1 - TABULATED VALUES FOR OPERATING CHARACTERISTIC CURVES FOR SINGLE SAMPLING PLANS

P _a	Acceptable Quality Levels (normal inspection)																
	4.0	4.0	15	25	40	65	100	150	250	400	650	1000					
	p (in defects per hundred units)																
	p (in percent defective)																
99.0	0.33	0.34	4.97	14.5	27.4	59.5	96.9	117	159	203	249	345	419	573	651	947	1029
95.0	1.70	1.71	11.8	27.3	45.5	87.1	133	157	206	256	308	415	496	663	748	1065	1152
90.0	3.45	3.50	17.7	36.7	58.2	105	155	181	234	288	343	456	541	716	804	1131	1222
75.0	9.14	9.60	32.0	57.6	84.5	141	199	228	287	347	408	530	623	809	903	1249	1344
50.0	20.6	23.1	55.9	89.1	122	189	256	289	356	422	489	622	722	922	1022	1389	1489
25.0	37.0	46.2	89.8	131	170	247	323	360	434	507	580	724	832	1046	1152	1539	1644
10.0	53.6	76.8	130	177	223	309	392	433	514	593	671	825	939	1165	1277	1683	1793
5.0	63.2	99.9	158	210	258	350	438	481	565	648	730	890	1008	1241	1356	1773	1886
1.0	78.4	154	221	280	335	437	533	580	672	761	848	1019	1145	1392	1513	1951	2069
	6.5	6.5	25	40	65	100	150	250	400	650	1000	1500	2000	2500	3000	3500	4000

Notes: Binomial distribution used for percent defective computations; Poissons for defects per hundred units.

TABLE X-B-2 - SAMPLING PLANS FOR SAMPLE SIZE CODE LETTER: B

Type of sampling plan	Cumulative sample size	Acceptable Quality Levels (normal inspection)																	Cumulative sample size
		Less than 4.0	4.0	6.5	10	15	25	40	65	100	150	250	400	650	1000				
		Ac Re	Ac Re	Ac Re	Ac Re	Ac Re	Ac Re	Ac Re	Ac Re	Ac Re	Ac Re	Ac Re	Ac Re	Ac Re	Ac Re				
Single	3	▽	0 1																3
Double	2	▽	*	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	2
	4			Letter	Letter	Letter	Letter	Letter	Letter	Letter	Letter	Letter	Letter	Letter	Letter	Letter	Letter	Letter	4
Multiple		▽	*	A	D	C													
		Less than 6.5	6.5	10	15	25	40	65	100	150	250	400	650	1000					
Acceptable Quality Levels (tightened inspection)																			

▽ = Use next subsequent sample size code letter for which acceptance and rejection numbers are available.
 Ac = Acceptance number
 Re = Rejection number
 * = Use single sampling plan above (or alternatively use letter E).
 ++ = Use double sampling plan above (or alternatively use letter D).

TABLE X-C—Tables for sample size code letter: C

CHART C - OPERATING CHARACTERISTIC CURVES FOR SINGLE SAMPLING PLANS

(Curves for double and multiple sampling are matched as closely as practicable)

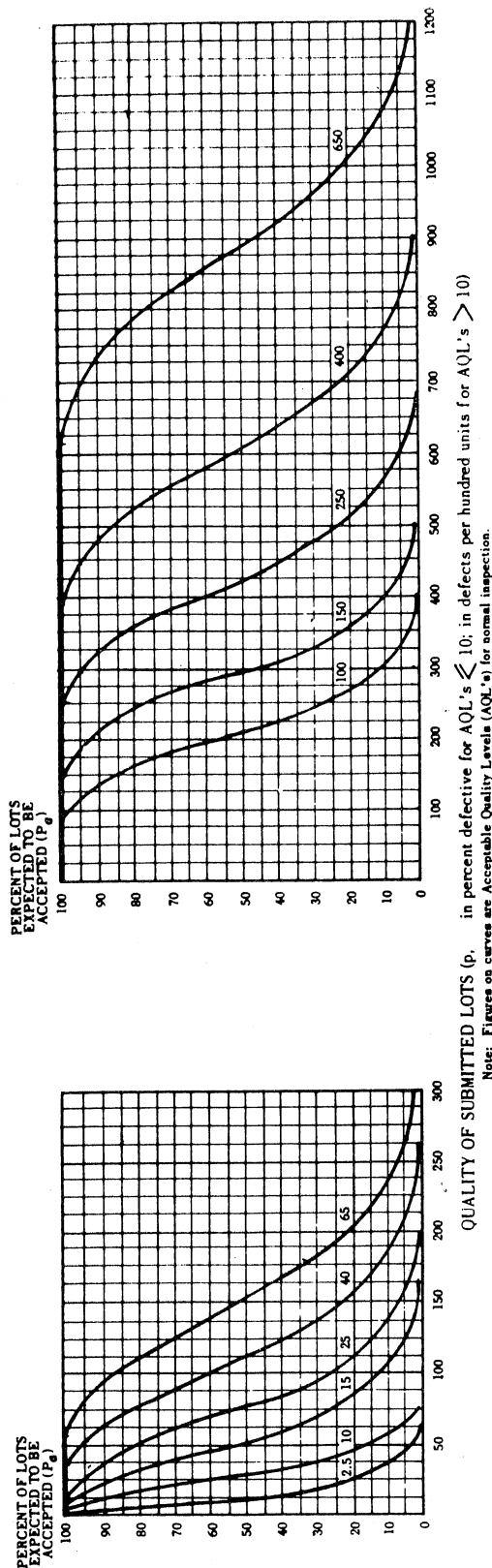


TABLE X-C-1 - TABULATED VALUES FOR OPERATING CHARACTERISTIC CURVES FOR SINGLE SAMPLING PLANS

P _a	Acceptable Quality Levels (normal inspection)																	
	2.5	10	2.5	10	15	25	40	65	100	150	250	400	650					
	p (in defects per hundred units)																	
	p (in percent defective)																	
99.0	0.20	3.28	0.20	2.89	8.72	16.5	35.7	58.1	70.1	95.4	122	150	207	251	344	391	568	618
95.0	1.02	7.63	1.03	7.10	16.4	27.3	52.3	79.6	93.9	123	154	185	249	298	398	449	639	691
90.0	2.09	11.2	2.10	10.6	22.0	34.9	63.0	93.1	109	140	173	206	273	325	429	482	679	733
75.0	5.59	19.4	5.76	19.2	34.5	50.7	84.4	119	137	172	208	245	318	374	485	542	749	806
50.0	12.9	31.4	13.9	33.6	53.5	73.4	113	153	173	213	253	293	373	433	553	613	833	893
25.0	24.2	45.4	27.7	53.9	78.4	102	148	194	216	260	304	348	435	499	627	691	923	987
10.0	36.9	58.4	46.1	77.8	106	134	186	235	260	308	356	403	495	564	699	766	1010	1076
5.0	45.1	65.8	59.9	94.9	126	155	210	263	289	339	389	438	534	605	745	814	1064	1131
1.0	60.2	77.8	92.1	133	168	201	262	320	348	403	456	509	612	687	835	908	1171	1241
	4.0	X	4.0	15	25	40	65	X	100	X	150	X	250	X	400	X	650	X
	Acceptable Quality Levels (tightened inspection)																	

Note: Binomial distribution used for percent defective computations; Poisson for defects per hundred units.

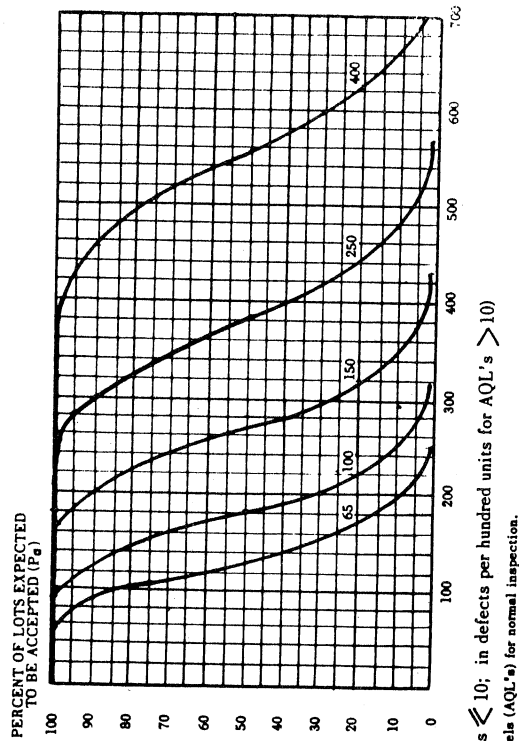
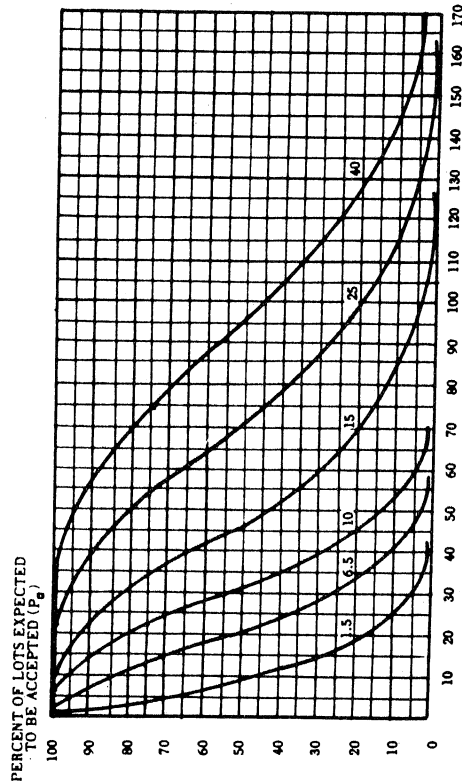
TABLE X-C-2 - SAMPLING PLANS FOR SAMPLE SIZE CODE LETTER: C

Type of sampling plan	Cumulative sample size	Acceptable Quality Levels (tightened inspection)																				Cumulative sample size														
		Less than 2.5	2.5	4.0	6.5	10	15	25	40	65	100	150	250	400	650	1000																				
			Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re																		
Single	5	▽	0	1		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	18	19	21	22	27	28	30	31	41	42	44	45		Use		
Double	3	▽	*		Use	0	2	0	3	1	4	2	5	3	7	3	5	9	6	10	7	11	9	14	11	16	15	20	17	22	23	29	25	31		Letter
	6				Letter	1	2	3	4	5	6	7	8	9	11	12	12	13	15	16	18	19	23	24	26	27	34	35	37	38	52	53	56	57		B
Multiple		▽	*		D																															
	Less than 4.0		4.0	6.5	10	15	25	40	65	100	150	250	400	650	1000																					

TABLE X-D—Tables for sample size code letter: D

CHART D - OPERATING CHARACTERISTIC CURVES FOR SINGLE SAMPLING PLANS

(Curves for double and multiple sampling are matched as closely as practicable)



QUALITY OF SUBMITTED LOTS (p , in percent defective for $AQL's \leq 10$; in defects per hundred units for $AQL's > 10$)

Note: Figures on curves are Acceptable Quality Levels ($AQL's$) for normal inspection.

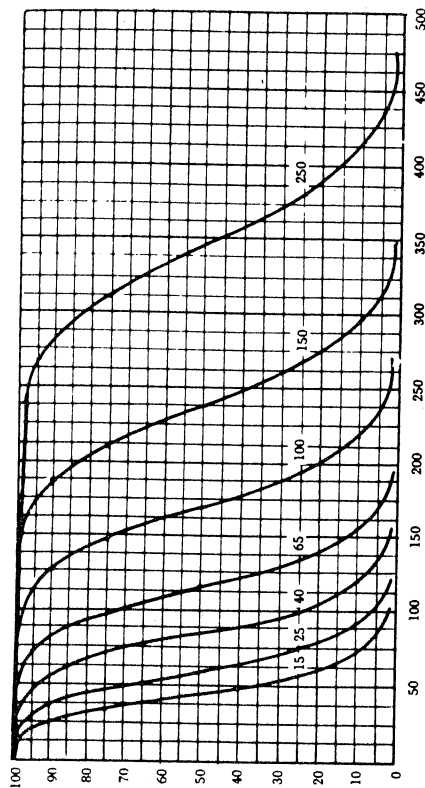
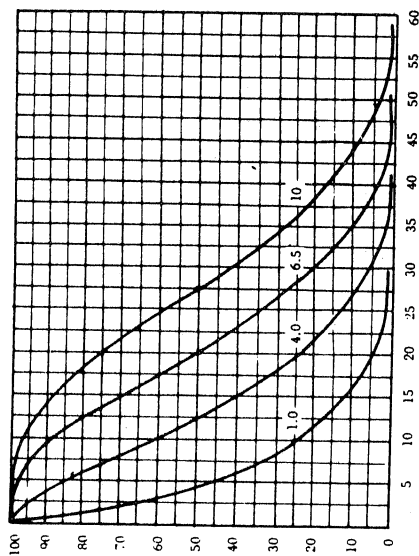
TABLE X-D-1 - TABULATED VALUES FOR OPERATING CHARACTERISTIC CURVES FOR SINGLE SAMPLING PLANS

P _a	Acceptable Quality Levels (normal inspection)															
	1.5	6.5	10	15.5	25	40	65	100	150	250	400					
	p (in defects per hundred units)															
	p (in percent defective)			p (in defects per hundred units)												
99.0	0.13	2.00	6.00	10.3	22.3	36.3	43.8	59.6	76.2	93.5	129	157	215	244	355	386
95.0	0.64	2.64	11.1	17.1	32.7	49.8	58.7	77.1	96.1	116	156	186	249	281	399	432
90.0	1.31	6.88	14.7	21.8	39.4	58.2	67.9	87.8	108	129	171	203	268	301	424	458
75.0	3.53	12.1	22.1	31.7	52.7	74.5	85.5	108	130	153	199	234	303	339	468	504
50.0	8.30	20.1	32.1	45.9	70.9	95.9	108	133	158	183	233	271	346	383	521	558
25.0	15.9	30.3	43.3	63.9	92.8	121	135	163	190	218	272	312	392	432	577	617
10.0	25.0	40.6	53.9	83.5	116	147	162	193	222	252	309	352	437	478	631	672
5.0	31.2	47.1	59.9	96.9	131	164	180	212	243	274	334	378	465	509	665	707
1.0	43.8	58.8	70.7	126	164	200	218	252	285	318	382	429	522	568	732	776
	2.5	10	×	25	40	×	65	×	100	×	150	×	250	×	400	×
Acceptable Quality Levels (tightened inspection)																

TABLE X-E—Tables for sample size code letter: E

CHART E - OPERATING CHARACTERISTIC CURVES FOR SINGLE SAMPLING PLANS
(Curves for double and multiple sampling are matched as closely as practicable)

PERCENT OF LOTS
EXPECTED TO BE
ACCEPTED (P_a)



QUALITY OF SUBMITTED LOTS (p, in percent defective for AQL's ≤ 10 ; in defects per hundred units for AQL's > 10)
Note: Figures on curves are Acceptable Quality Levels (AQL's) for normal inspection.

TABLE X-E-1 - TABULATED VALUES FOR OPERATING CHARACTERISTIC CURVES FOR SINGLE SAMPLING PLANS

P _a	Acceptable Quality Levels (normal inspection)																			
	1.0	4.0	6.5	10	1.0	4.0	6.5	10	15	25	40	65	100	150	250					
	p (in percent defective)																			
	p (in defects per hundred units)																			
99.0	0.077	1.19	3.63	7.00	0.078	1.15	3.35	6.33	13.7	22.4	27.0	36.7	46.9	57.5	79.6	96.7	132	150	219	238
95.0	0.394	2.81	6.63	11.3	0.395	2.73	6.29	10.5	20.1	30.6	36.1	47.5	59.2	71.1	95.7	115	153	173	246	266
90.0	0.807	4.16	8.80	14.2	0.808	4.09	8.48	13.4	24.2	35.8	41.8	54.0	66.5	79.2	105	125	165	185	261	282
75.0	2.19	7.41	13.4	19.9	2.22	7.39	13.3	19.5	32.5	45.8	52.6	66.3	80.2	94.1	122	144	187	208	288	310
50.0	5.19	12.6	20.0	27.5	5.33	12.9	20.6	28.2	43.6	59.0	66.7	82.1	97.5	113	144	168	213	236	321	344
25.0	10.1	19.4	28.0	36.2	10.7	20.7	30.2	39.3	57.1	74.5	83.1	100	117	134	167	192	241	266	355	379
10.0	16.2	26.8	36.0	44.4	17.7	29.9	40.9	51.4	71.3	90.5	100	119	137	155	190	217	269	295	388	414
5.0	20.6	31.6	41.0	49.5	23.0	36.5	48.4	59.6	80.9	101	111	130	150	168	205	233	286	313	409	435
1.0	29.8	41.5	50.6	58.7	35.4	51.1	64.7	77.3	101	123	134	155	176	196	235	264	321	349	450	477
	1.5	6.5	10	×	1.5	6.5	10	15	25	×	40	×	65	×	100	×	150	×	250	×
	Acceptable Quality Levels (tightened inspection)																			

Note: Binomial distribution used for percent defective computations; Poisson for defects per hundred units.

TABLE X-E-2 - SAMPLING PLANS FOR SAMPLE SIZE CODE LETTER: E

Type of sampling plan	Cumulative sample size	Acceptable Quality Levels (normal inspection)																	Cumulative sample size
		Less than 1.0	1.0	1.5	2.5	4.0	6.5	10	15	25	40	65	100	150	250	Higher than 250			
		Ac	ReAc	ReAc	ReAc	ReAc	ReAc	ReAc	ReAc	ReAc	ReAc	ReAc	ReAc	ReAc	ReAc	ReAc	Re		
		ReAc	ReAc	ReAc	ReAc	ReAc	ReAc	ReAc	ReAc	ReAc	ReAc	ReAc	ReAc	ReAc	ReAc	ReAc	Re		
Single	13	▽	0	1															13
					Use	Use													
Double	8	▽	*																8
	16																		16
Multiple	3	▽	*																3
	6																		6
	9																		9
	12																		12
	15																		15
	18																		18
	21																		21
		Less than 1.5	1.5	2.5	4.0	6.5	10	15	25	40	65	100	150	250	Higher than 250				
		Acceptable Quality Levels (tightened inspection)																	

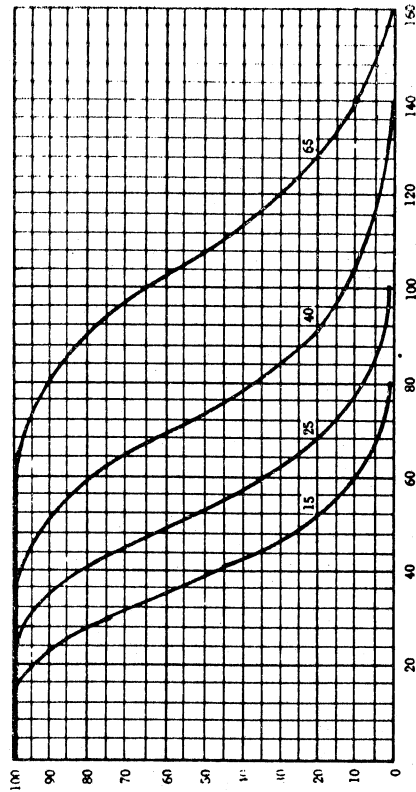
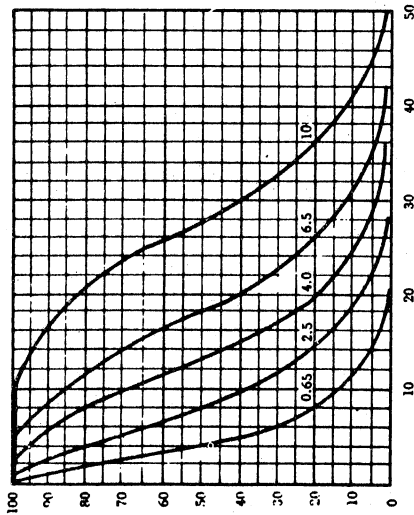
- △ = Use next preceding sample size code letter for which acceptance and rejection numbers are available.
- ▽ = Use next subsequent sample size code letter for which acceptance and rejection numbers are available.
- Ac = Acceptance number.
- Re = Rejection number.
- * = Use single sampling plan above (or alternatively use letter H).
- # = Acceptance not permitted at this sample size.

TABLE X-F—Tables for sample size code letter: F

CHART F - OPERATING CHARACTERISTIC CURVES FOR SINGLE SAMPLING PLANS

(Curves for double and multiple sampling are matched as closely as practicable)

PERCENT OF LOTS
EXPECTED TO BE
ACCEPTED (P_a)



QUALITY OF SUBMITTED LOTS (p , in percent defective for AQL's ≤ 10 ; in defects per hundred units for AQL's > 10)

Note: Figures on curves are Acceptable Quality Levels (AQL's) for normal inspection.

TABLE X-F-1 - TABULATED VALUES FOR OPERATING CHARACTERISTIC CURVES FOR SINGLE SAMPLING PLANS

P_a	Acceptable Quality Levels (normal inspection)														
	p (in percent defective)														
	0.65	2.5	4.0	6.5	10	0.65	2.5	4.0	6.5	10	15	25	40	65	100
99.0	0.050	0.75	2.25	4.31	9.75	0.051	0.75	2.18	4.12	8.92	14.5	23.9	30.5	37.4	51.7
95.0	0.256	1.80	4.22	7.13	14.0	0.257	1.78	4.09	6.83	13.1	19.9	23.5	30.8	38.5	46.2
90.0	0.525	2.69	5.64	9.03	16.6	0.527	2.66	5.51	8.73	15.8	23.3	27.2	35.1	43.2	51.5
75.0	1.43	4.81	8.70	12.8	21.6	1.44	4.81	8.68	12.7	21.1	29.8	34.2	43.1	52.1	61.2
50.0	3.41	8.25	13.1	18.1	27.9	3.47	8.39	13.4	18.4	28.4	38.3	43.3	53.3	63.3	73.3
25.0	6.70	12.9	18.7	24.2	34.8	6.93	13.5	19.6	25.5	37.1	48.4	54.0	65.1	76.1	87.0
10.0	10.9	18.1	24.5	30.4	41.5	11.5	19.5	26.6	33.4	46.4	58.9	65.0	77.0	88.9	101
5.0	13.9	21.6	28.3	34.4	45.6	15.0	23.7	31.5	38.8	52.6	65.7	72.2	84.8	97.2	109
1.0	20.6	28.9	35.6	42.0	53.4	23.0	33.2	42.0	50.2	65.5	80.0	87.0	101	114	127
1.0	1.0	4.0	6.5	10	15	1.0	4.0	6.5	10	15	25	40	65	100	172

Acceptable Quality Levels (tightened inspection)

Note: Binomial distribution used for percent defective computations; Poisson for defects per hundred units.

TABLE X-F-2 - SAMPLING PLANS FOR SAMPLE SIZE CODE LETTER: F

Type of sampling plan	Cumulative sample size	Acceptable Quality Levels (normal inspection)																												Cumulative sample size				
		Less than 0.65		0.65		1.0		1.5		2.5		4.0		6.5		10		15		25		40		65		Higher than 65								
		Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re							
		Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re							
Single	20	▽	0	1																													△	20
Double	13	▽	*																														△	13
	26																																	26
Multiple	5	▽	*																														△	5
	10																																	10
	15																																	15
	20																																	20
	25																																	25
	30																																	30
	35																																	35
		Less than 1.0	1.0		1.5	2.5	4.0	6.5	10	15		25	40	65		Higher than 65																		
		Acceptable Quality Levels (tightened inspection)																																

△ = Use next preceding sample size code letter for which acceptance and rejection numbers are available.

▽ = Use next subsequent sample size code letter for which acceptance and rejection numbers are available.

Ac = Acceptance number

Re = Rejection number

* = Use single sampling plan above (or alternatively use letter J).

• = Acceptance not permitted at this sample size.

TABLE X-G—Tables for sample size code letter: G

CHART G - OPERATING CHARACTERISTIC CURVES FOR SINGLE SAMPLING PLANS

(Curves for double and multiple sampling are matched as closely as practicable)

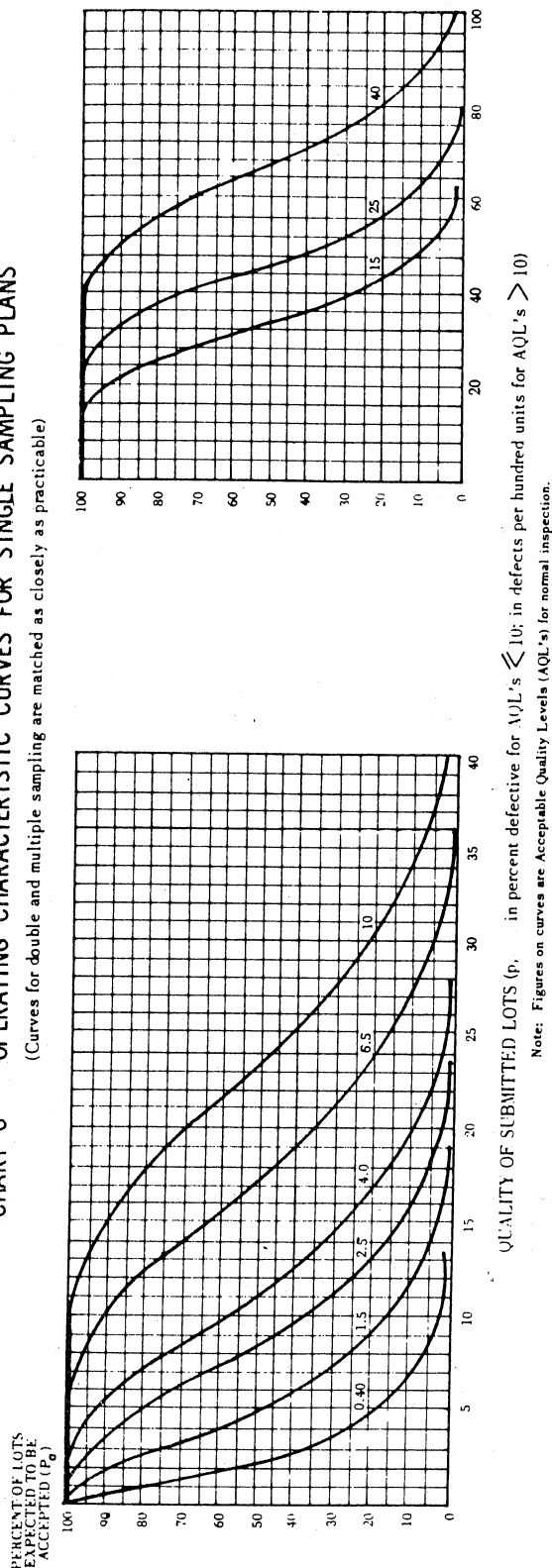


TABLE X-G-1 - TABULATED VALUES FOR OPERATING CHARACTERISTIC CURVES FOR SINGLE SAMPLING PLANS

P _a	Acceptable Quality Levels (normal inspection)														
	p (in percent defective)					p (in defects per hundred units)									
	0.40	1.5	2.5	4.0	6.5	10	0.40	1.5	2.5	4.0	6.5	10	15	25	40
99.0	0.032	0.475	1.38	2.63	5.94	9.75	0.032	0.466	1.36	2.57	5.57	9.08	11.0	14.9	19.1
95.0	0.161	1.13	2.59	4.39	8.50	13.1	0.160	1.10	2.55	4.26	8.16	12.4	14.7	19.3	24.0
90.0	0.329	1.67	3.50	5.56	10.2	15.1	0.328	1.66	3.44	5.45	9.85	14.6	17.0	21.9	27.0
75.0	0.895	3.01	5.42	7.98	13.4	19.0	0.900	3.00	5.39	7.92	13.2	18.6	21.4	26.9	32.6
50.0	2.14	5.19	8.27	11.4	17.5	23.7	2.16	5.24	8.35	11.5	17.7	24.0	27.1	33.3	39.6
25.0	4.23	8.19	11.9	15.4	22.3	29.0	4.33	8.41	12.3	16.0	23.2	30.3	33.8	40.7	47.6
10.0	6.94	11.6	15.8	19.7	27.1	34.1	7.19	12.2	16.6	20.9	29.0	36.8	40.6	48.1	55.6
5.0	8.94	14.0	18.4	22.5	30.1	37.2	9.36	14.8	19.7	24.2	32.9	41.1	45.1	53.0	60.8
1.0	13.5	19.0	23.7	28.0	35.9	43.3	14.4	20.7	26.3	31.4	41.0	50.0	54.4	63.0	71.3
	0.65	2.5	4.0	6.5	10	15	0.65	2.5	4.0	6.5	10	15	25	40	40

Acceptable Quality Levels (tightened inspection)

Note: Binomial distribution used for percent defective computations; Poisson for defects per hundred units.

TABLE X-G-2 - SAMPLING PLANS FOR SAMPLE SIZE CODE LETTER: G

Type of sampling plan	Cumulative sample size	Acceptable Quality Levels (normal inspection)																				Cumulative sample size
		Less than 0.40		0.40	0.65	1.0	1.5	2.5	4.0	6.5	10	15	25	40	Higher than 40							
		Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re					
		Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re					
Single	32	▽	0	1																	32	
					Use																	
Double	20	▽			Use																20	
	40		*		Letter																40	
Multiple	8	▽			F																8	
	16				J																16	
	24																				24	
	32																				32	
	40																				40	
	48																				48	
	56																				56	
		Less than 0.65	0.65		1.0	1.5	2.5	4.0	6.5	10	15	25	40	Higher than 40								
		Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	

Acceptable Quality Levels (tightened inspection)

- △ = Use next preceding sample size code letter for which acceptance and rejection numbers are available.
 ▽ = Use next subsequent sample size code letter for which acceptance and rejection numbers are available.
 Ac = Acceptance number.
 Re = Rejection number.
 * = Use single sampling plan above (or alternatively use letter K).
 # = Acceptance not permitted at this sample size.

TABLE X-H—Tables for sample size code letter: H

CHART H - OPERATING CHARACTERISTIC CURVES FOR SINGLE SAMPLING PLANS

(Curves for double and multiple sampling are matched as closely as practicable)

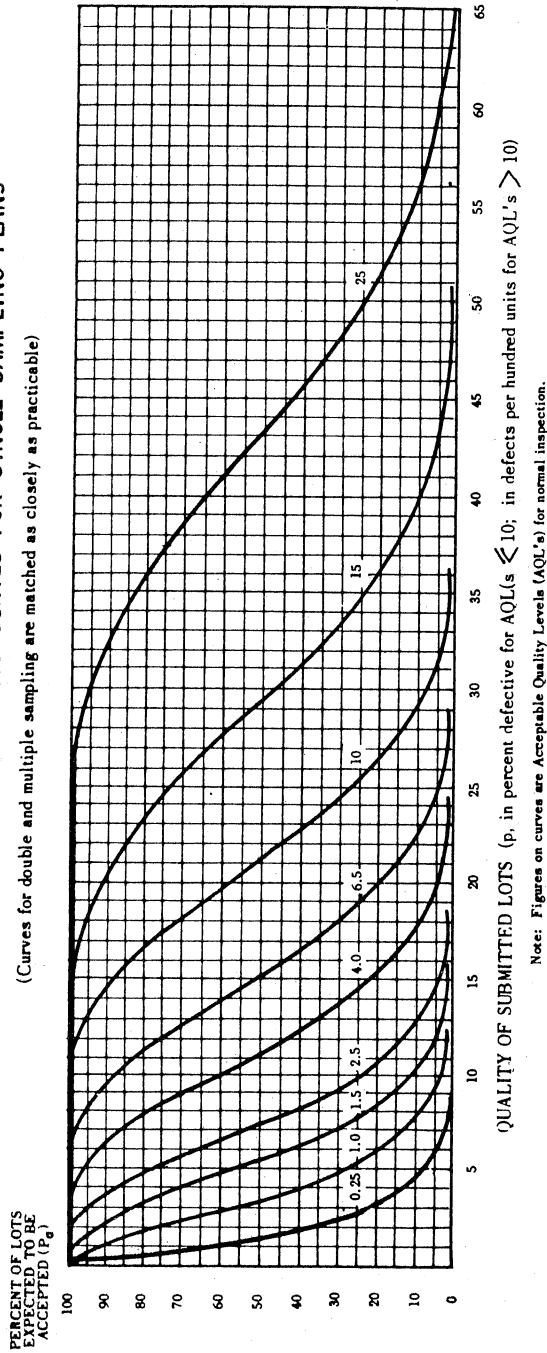


TABLE X-H-1 - TABULATED VALUES FOR OPERATING CHARACTERISTIC CURVES FOR SINGLE SAMPLING PLANS

P_a	Acceptable Quality Levels (normal inspection)														
	p (in percent defective)							p (in defects per hundred units)							
	0.25	1.0	1.5	2.5	4.0	6.5	10	0.25	1.0	1.5	2.5	4.0	6.5	10	15
99.0	0.020	0.306	0.888	1.69	3.66	6.06	7.41	0.020	0.298	0.872	1.65	3.57	5.81	7.01	15.0
95.0	0.103	0.712	1.66	2.77	5.34	8.20	9.74	0.103	0.710	1.64	2.73	5.23	7.96	9.39	20.7
90.0	0.210	1.07	2.23	3.54	6.42	9.53	11.2	0.210	1.06	2.20	3.49	6.30	9.31	10.9	24.9
75.0	0.574	1.92	3.46	5.09	8.51	12.0	13.8	0.576	1.92	3.45	5.07	8.44	11.9	13.7	27.3
50.0	1.38	3.33	5.31	7.30	11.3	15.2	17.2	1.39	3.36	5.35	7.34	11.3	15.3	17.3	31.8
25.0	2.74	5.30	7.70	10.0	14.5	18.8	21.0	2.77	5.39	7.84	10.2	14.8	19.4	21.6	37.4
10.0	4.50	7.56	10.3	12.9	17.8	22.4	24.7	4.61	7.78	10.6	13.4	18.6	23.5	26.0	43.3
5.0	5.82	9.13	12.1	14.8	19.9	24.7	27.0	5.99	9.49	12.6	15.5	21.0	26.3	28.9	49.9
1.0	8.80	12.5	15.9	18.8	24.3	29.2	31.7	9.21	13.3	16.8	20.1	26.2	32.0	34.8	56.4
	0.40	1.5	2.5	4.0	6.5	10	10	0.40	1.5	2.5	4.0	6.5	10	15	60.5
															68.7
															25

Note: Binomial distribution used for percent defective computations; Poisson for defects per hundred units.

TABLE X-H-2 - SAMPLING PLANS FOR SAMPLE SIZE CODE LETTER: H

Type of sampling plan	Cumulative sample size	Acceptable Quality Levels (normal inspection)																														
		Less than 0.25	0.25		0.40		0.65		1.0		1.5		2.5		4.0		6.5		10		15		25		Higher than 25							
			Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re				
			Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re				
Single	50	▽	0	1																												
Double	32	▽	*																													
	64																															
Multiple	13	▽	*																													
	26																															
	39																															
	52																															
	65																															
	78																															
	91																															
		Less than 0.40	0.40																													
		Acceptable Quality Levels (tightened inspection)																														

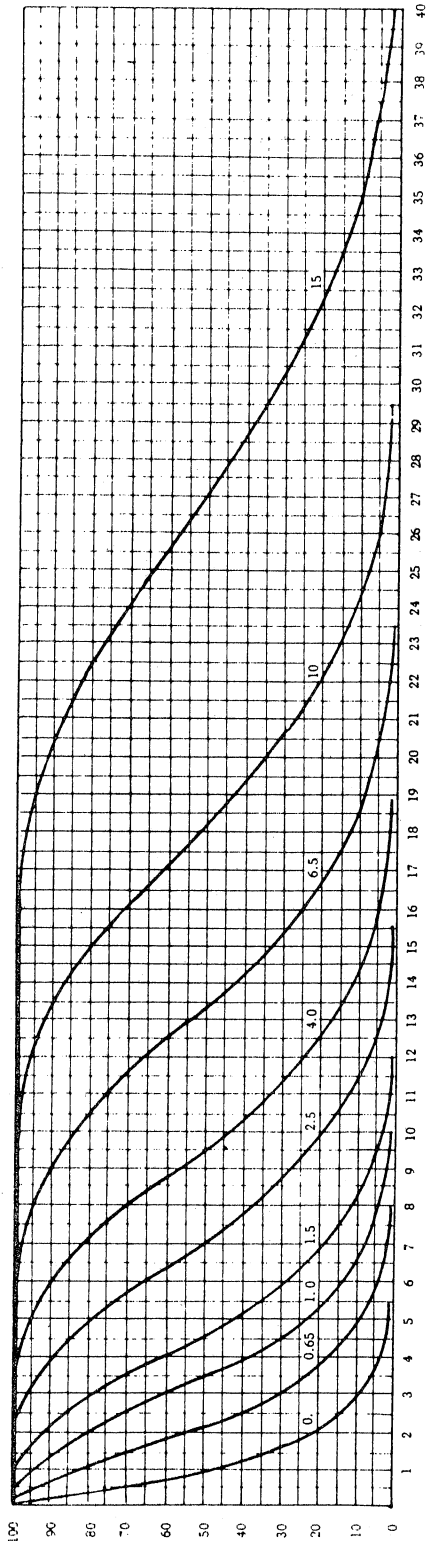
△ = Use next preceding sample size code letter for which acceptance and rejection numbers are available.
 ▽ = Use next subsequent sample size code letter for which acceptance and rejection numbers are available.
 Ac = Acceptance number
 Re = Rejection number
 * = Use single sampling plan above (or alternatively use letter L).
 # = Acceptance not permitted at this sample size.

TABLE X-J — Tables for sample size code letter: J

CHART J - OPERATING CHARACTERISTIC CURVES FOR SINGLE SAMPLING PLANS

(Curves for double and multiple sampling are matched as closely as practicable)

PERCENT OF LOTS
EXPECTED TO BE
ACCEPTED (P_a)



QUALITY OF SUBMITTED LOTS (p , in percent defective for AQL's ≤ 10 ; in defects per hundred units for AQL's > 10)

Note: Figures on curves are Acceptable Quality Levels (AQL's) for normal inspection.

TABLE X-J-1 - TABULATED VALUES FOR OPERATING CHARACTERISTIC CURVES FOR SINGLE SAMPLING PLANS

P_a	Acceptable Quality Levels (normal inspection)														
	0.15	0.65	1.0	1.5	2.5	4.0	6.5	10	0.15	0.65	1.0	1.5	2.5	4.0	6.5
	p (in percent defective)								p (in defects per hundred units)						
99.0	0.013	0.188	0.550	1.05	2.30	3.72	4.50	6.13	7.88	9.75	0.013	0.186	0.545	1.03	2.23
95.0	0.064	0.444	1.03	1.73	3.32	5.06	5.98	7.91	9.89	11.9	0.064	0.444	1.02	1.71	3.27
90.0	0.132	0.666	1.38	2.20	3.98	5.91	6.91	8.95	11.0	13.2	0.131	0.665	1.38	2.18	3.94
75.0	0.359	1.202	2.16	3.18	5.30	7.50	8.62	10.9	13.2	15.5	0.360	1.20	2.16	3.17	5.27
50.0	0.863	2.09	3.33	4.57	7.06	9.55	10.8	13.3	15.8	18.3	0.866	2.10	3.34	4.59	7.09
25.0	1.72	3.33	4.84	6.31	9.14	11.9	13.3	16.0	18.6	21.3	1.73	3.37	4.90	6.39	9.28
10.0	2.84	4.78	6.52	8.16	11.3	14.2	15.7	18.6	21.4	24.2	2.88	4.86	6.65	8.35	11.6
5.0	3.68	5.80	7.66	9.39	12.7	15.8	17.3	20.3	23.2	26.0	3.75	5.93	7.87	9.69	13.1
1.0	5.59	8.00	10.1	12.0	15.6	18.9	20.5	23.6	26.5	29.5	5.76	8.30	10.5	12.6	16.4
0.25	1.0	1.5	2.5	4.0	6.5	10	15	25	4.0	6.5	10	15	25	4.0	6.5
P_a	Acceptable Quality Levels (tightened inspection)														
	0.15	0.65	1.0	1.5	2.5	4.0	6.5	10	0.15	0.65	1.0	1.5	2.5	4.0	6.5
	p (in percent defective)								p (in defects per hundred units)						
99.0	0.013	0.188	0.550	1.05	2.30	3.72	4.50	6.13	7.88	9.75	0.013	0.186	0.545	1.03	2.23
95.0	0.064	0.444	1.03	1.73	3.32	5.06	5.98	7.91	9.89	11.9	0.064	0.444	1.02	1.71	3.27
90.0	0.132	0.666	1.38	2.20	3.98	5.91	6.91	8.95	11.0	13.2	0.131	0.665	1.38	2.18	3.94
75.0	0.359	1.202	2.16	3.18	5.30	7.50	8.62	10.9	13.2	15.5	0.360	1.20	2.16	3.17	5.27
50.0	0.863	2.09	3.33	4.57	7.06	9.55	10.8	13.3	15.8	18.3	0.866	2.10	3.34	4.59	7.09
25.0	1.72	3.33	4.84	6.31	9.14	11.9	13.3	16.0	18.6	21.3	1.73	3.37	4.90	6.39	9.28
10.0	2.84	4.78	6.52	8.16	11.3	14.2	15.7	18.6	21.4	24.2	2.88	4.86	6.65	8.35	11.6
5.0	3.68	5.80	7.66	9.39	12.7	15.8	17.3	20.3	23.2	26.0	3.75	5.93	7.87	9.69	13.1
1.0	5.59	8.00	10.1	12.0	15.6	18.9	20.5	23.6	26.5	29.5	5.76	8.30	10.5	12.6	16.4
0.25	1.0	1.5	2.5	4.0	6.5	10	15	25	4.0	6.5	10	15	25	4.0	6.5

Note: All values given in above table based on Poisson distribution as an approximation to the Binomial.

TABLE X-K—Tables for sample size code letter: K

CHART K - OPERATING CHARACTERISTIC CURVES FOR SINGLE SAMPLING PLANS

(Curves for double and multiple sampling are matched as closely as practicable)

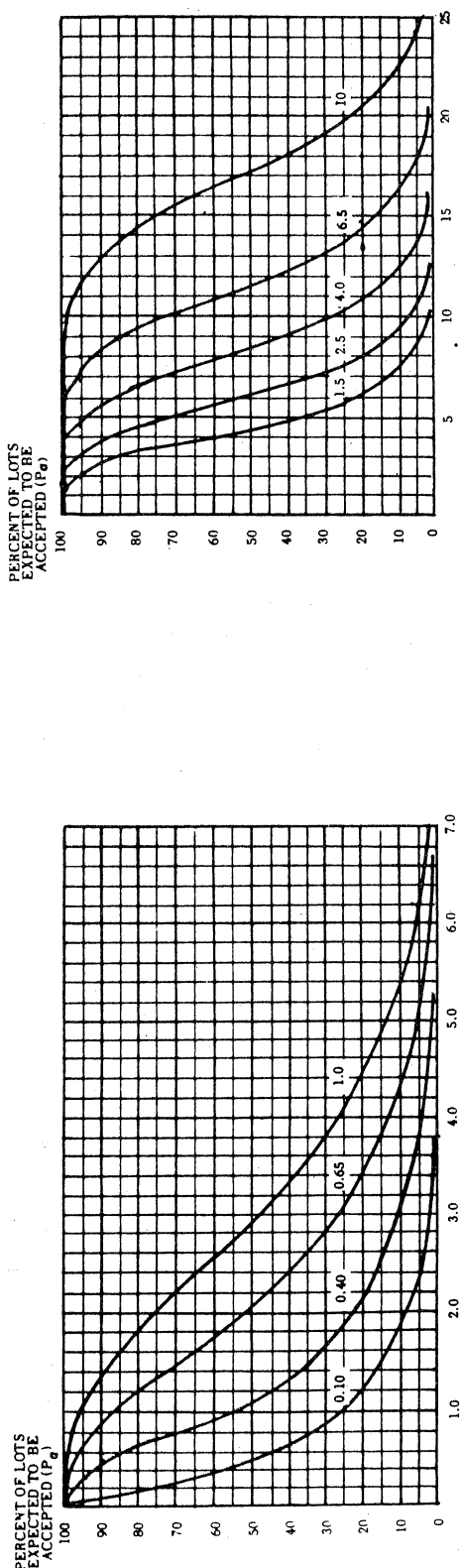


TABLE X-K-1 - TABULATED VALUES FOR OPERATING CHARACTERISTIC CURVES FOR SINGLE SAMPLING PLANS

P _a	Acceptable Quality Levels (normal inspection)									
	0.10	0.40	0.65	1.0	1.5	2.5	4.0	6.5	10	
	p (in percent defective or defects per hundred units)									
99.0	0.0081	0.119	0.349	0.658	1.43	2.33	2.81	3.82	4.88	5.98
95.0	0.0410	0.284	0.654	1.09	2.09	3.19	3.76	4.94	6.15	7.40
90.0	0.0840	0.426	0.882	1.40	2.52	3.73	4.35	5.62	6.92	8.24
75.0	0.230	0.769	0.382	2.03	3.38	4.77	5.47	6.90	8.34	9.79
50.0	0.554	1.34	2.14	2.94	4.54	6.14	6.94	8.53	10.1	11.7
25.0	1.11	2.15	3.14	4.09	5.94	7.75	8.64	10.4	12.2	13.9
10.0	1.84	3.11	4.26	5.35	7.42	9.42	10.4	12.3	14.2	16.1
5.0	2.40	3.80	5.04	6.20	8.41	10.5	11.5	13.6	15.6	17.5
1.0	3.68	5.31	6.73	8.04	10.5	12.8	18.3	16.1	18.3	20.4
	0.15	0.65	1.0	1.5	2.5	4.0	6.5	10	10	10
	Acceptable Quality Levels (tightened inspection)									

Note: All values given in above table based on Poisson distribution as an approximation to the Binomial.

TABLE X-K-2 - SAMPLING PLANS FOR SAMPLE SIZE CODE LETTER: K

Type of sampling plan	Cumulative sample size	Acceptable Quality Levels (normal inspection)																										Cumulative sample size
		Less than 0.10		0.10		0.15		0.25		0.40		0.65		1.0		1.5		2.5		4.0		6.5		10		Higher than 10		
		Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	
		Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	
Single	125	▽	0	1																							△	125
Double	80	▽	*																								△	80
	160																											160
Multiple	32	▽	*																								△	32
	64																											64
	96																											96
	128																											128
	160																											160
	192																											192
	224																											224
		Less than 0.15	0.15	0.25	0.40	0.65	1.0	1.5	2.5	4.0	6.5	10	Higher than 10															
		Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	
		Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	

Acceptable Quality Levels (tightened inspection)

△ = Use next preceding sample size code letter for which acceptance and rejection numbers are available.

▽ = Use next subsequent sample size code letter for which acceptance and rejection numbers are available.

Ac = Acceptance number

Re = Rejection number

* = Use single sampling plan above (or alternatively use letter N).

= Acceptance not permitted at this sample size.

TABLE X-L-2 - SAMPLING PLANS FOR SAMPLE SIZE CODE LETTER: L

Type of sampling plan	Cumulative sample size	Acceptable Quality Levels (normal inspection)																	Cumulative sample size									
		Less than 0.065	0.065	0.10	0.15	0.25	0.40	0.65	1.0	1.5	2.5	4.0	6.5	Higher than 6.5														
															Ac	Re	Ac	Re		Ac	Re	Ac	Re	Ac	Re	Ac	Re	
																												Ac
Single	200	▽	0 1			1 2	2 3	3 4	5 6	7 8	8 9	10 11	12 13	14 15	18 19	21 22	△	200										
Double	125	▽	*	Use Letter K	Use Letter N	0 2	0 3	1 4	2 5	3 7	3 7	5 9	6 10	7 11	9 14	11 16	△	125										
	250		1 2															3 4	4 5	6 7	8 9	11 12	15 16	18 19	23 24	26 27	250	
Multiple	50	▽	*	Use Letter N	# 2	# 2	# 3	# 4	0 4	0 4	2 7	3 8	6 10	7 12	8 13	11 17	13 19	50										
	100		# 2															0 3	1 5	1 6	3 9	4 10	6 12	7 14	100			
	150		0 2															0 3	1 4	2 6	3 8	4 9	7 12	8 13	11 17	13 19	150	
	200		0 3															1 4	2 5	3 7	5 10	6 11	8 13	10 15	17 16	22 19	25 200	
	250		1 3															2 4	3 6	5 8	7 11	9 12	11 15	14 17	20 22	25 25	29 250	
	300		1 3															3 5	4 6	7 9	10 12	12 14	14 17	18 20	21 23	27 29	31 33	300
	350		2 3															4 5	6 7	9 10	13 14	14 15	18 19	21 22	25 26	32 33	37 38	350
		Less than 0.10	0.10	0.15	0.25	0.40	0.65	1.0	1.5	2.5	4.0	6.5	Higher than 6.5															
Acceptable Quality Levels (tightened inspection)																												

△ = Use next preceding sample size code letter for which acceptance and rejection numbers are available.

▽ = Use next subsequent sample size code letter for which acceptance and rejection numbers are available.

Ac = Acceptance number

Re = Rejection number

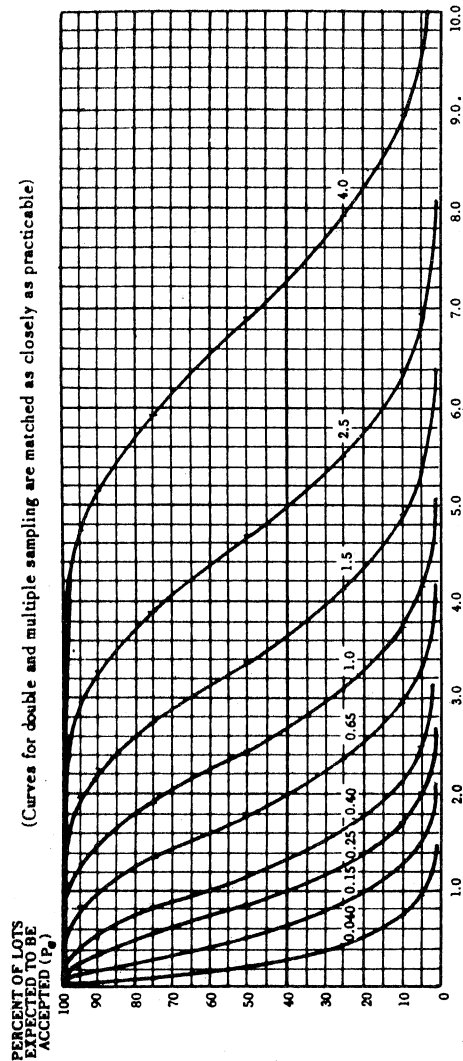
* = Use single sampling plan above (or alternatively use letter P).

= Acceptance not permitted at this sample size.

TABLE X-M—Tables for sample size code letter: M

CHART M - OPERATING CHARACTERISTIC CURVES FOR SINGLE SAMPLING PLANS

(Curves for double and multiple sampling are matched as closely as practicable)



QUALITY OF SUBMITTED LOTS (p , in percent defective for AQL's ≤ 10 ; in defects per hundred units for AQL's > 10)
Note: Figures on curves are Acceptable Quality Levels (AQL's) for normal inspection.

TABLE X-M-1 - TABULATED VALUES FOR OPERATING CHARACTERISTIC CURVES FOR SINGLE SAMPLING PLANS

P_a	Acceptable Quality Levels (normal inspection)										
	0.040	0.15	0.25	0.40	0.65	1.0	1.5	2.5	4.0	10.0	10.0
	p (in percent defective or in defects per hundred units)										
99.0	0.0032	0.047	0.138	0.261	0.566	0.922	1.11	1.51	1.94	2.38	3.28
95.0	0.0163	0.112	0.259	0.433	0.829	1.26	1.49	1.96	2.44	2.94	3.95
90.0	0.0333	0.168	0.349	0.533	1.00	1.48	1.72	2.23	2.75	3.27	4.34
75.0	0.0914	0.305	0.580	0.804	1.34	1.89	2.17	2.74	3.31	3.89	5.05
50.0	0.220	0.532	0.848	1.17	1.80	2.43	2.75	3.39	4.02	4.66	5.93
25.0	0.440	0.854	1.24	1.62	2.36	3.07	3.43	4.13	4.83	5.52	6.90
10.0	0.731	1.23	1.69	2.12	2.94	3.74	4.13	4.89	5.65	6.39	7.86
5.0	0.951	1.51	2.00	2.46	3.34	4.17	4.58	5.38	6.17	6.95	8.47
1.0	1.46	2.11	2.67	3.19	4.16	5.08	5.53	6.40	7.25	8.08	9.71
0.065	0.25	0.40	0.65	1.0	1.5	2.5	4.0	6.0	8.0	10.0	10.0
Acceptable Quality Levels (tightened inspection)											

Note: All values given in above table based on Poisson distribution as an approximation to the Binomial.

TABLE X-M-2 - SAMPLING PLANS FOR SAMPLE SIZE CODE LETTER: M

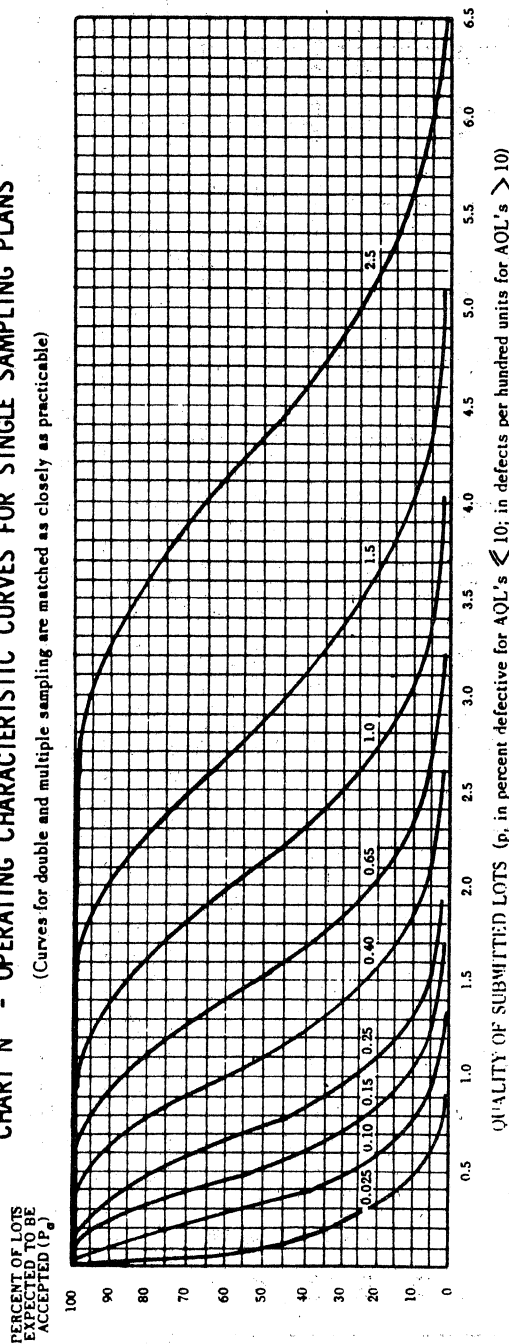
Type of sampling plan	Cumulative sample size	Acceptable Quality Levels (normal inspection)																										Cumulative sample size		
		Less than 0.040	0.040		0.065	0.10	0.15	0.25	0.40	0.65	1.0	1.5	2.5	4.0	Higher than 4.0															
			Ac	Re											Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re						
Single	315	▽	0	1																									△	315
Double	200	▽	*																										△	200
	400																													400
Multiple	80	▽	*																										△	80
	160																													160
	240																													240
	320																													320
	400																													400
	480																													480
	560																													560
		Less than 0.065	0.065																										Higher than 4.0	
Acceptable Quality Levels (tightened inspection)																														

△ = Use next preceding sample size code letter for which acceptance and rejection numbers are available.
▽ = Use next subsequent sample size code letter for which acceptance and rejection numbers are available.
Ac = Acceptance number.
Re = Rejection number.
* = Use single sampling plan above (or alternatively use letter Q).
= Acceptance not permitted at this sample size.

TABLE X-N — Tables for sample size code letter: N

CHART N - OPERATING CHARACTERISTIC CURVES FOR SINGLE SAMPLING PLANS

(Curves for double and multiple sampling are matched as closely as practicable)



Note: Figures on curves are Acceptable Quality Levels (AQL's) for normal inspection.

TABLE X-N-1 - TABULATED VALUES FOR OPERATING CHARACTERISTIC CURVES FOR SINGLE SAMPLING PLANS

P _a	Acceptable Quality Levels (normal inspection)											
	0.025	0.10	0.15	0.25	0.40	0.65	1.0	1.5	2.5	4.0	6.0	10.0
	p (in percent defective or in defects per hundred units)											
99.0	0.0020	0.030	0.087	0.165	0.357	0.581	0.701	0.954	1.22	1.50	2.07	2.51
95.0	0.0103	0.071	0.164	0.273	0.523	0.796	0.939	1.23	1.54	1.85	2.49	2.98
90.0	0.0210	0.106	0.220	0.349	0.630	0.931	1.09	1.40	1.73	2.06	2.73	3.25
75.0	0.0576	0.192	0.345	0.507	0.844	1.19	1.37	1.72	2.08	2.45	3.18	3.74
50.0	0.139	0.336	0.535	0.734	1.13	1.53	1.73	2.13	2.53	2.93	3.73	4.33
25.0	0.277	0.539	0.784	1.02	1.48	1.94	2.16	2.60	3.04	3.48	4.35	4.99
10.0	0.461	0.778	1.06	1.34	1.86	2.35	2.60	3.08	3.56	4.03	4.95	5.64
5.0	0.599	0.949	1.26	1.55	2.10	2.63	2.89	3.39	3.89	4.38	5.34	6.05
1.0	0.921	1.328	1.68	2.01	2.62	3.20	3.48	4.03	4.56	5.09	6.12	6.87
0.040	0.15	0.25	0.40	0.65	1.0	1.5	2.0	2.5	3.0	3.5	4.0	4.5
Acceptable Quality Levels (tightened inspection)												

Note: All values given in above table based on Poisson distribution as an approximation to the Binomial

TABLE X-N-2 - SAMPLING PLANS FOR SAMPLE SIZE CODE LETTER: N

Type of sampling plan	Cumulative sample size	Acceptable Quality Levels (normal inspection)																																
		Less than 0.025		0.025	0.040	0.065	0.10	0.15	0.25	0.40	0.65	1.0		1.5		2.5		Higher than 2.5																
		Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re													
		Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re													
Single	500	▽	0	1	Use																												△	500
					Use																													
Double	315 630	▽	•	Letter																												△	315 630	
				Letter																														
Multiple	125 250 375 500 625 750 875	▽	•	M																												△	125 250 375 500 625 750 875	
				Q																														
				P																														
Less than 0.040		0.040	0.065		0.10	0.15	0.25	0.40	0.65	1.0		1.5		2.5		Higher than 2.5		Acceptable Quality Levels (tightened inspection)										Higher than 2.5						

- △ = Use next preceding sample size code letter for which acceptance and rejection numbers are available.
▽ = Use next subsequent sample size code letter for which acceptance and rejection numbers are available.
Ac = Acceptance number
Re = Rejection number
• = Use single sampling plan above (or alternatively use letter R).
= Acceptance not permitted at this sample size.

TABLE X-P—Tables for sample size code letter: P

CHART P - OPERATING CHARACTERISTIC CURVES FOR SINGLE SAMPLING PLANS

(Curves for double and multiple sampling are matched as closely as practicable)

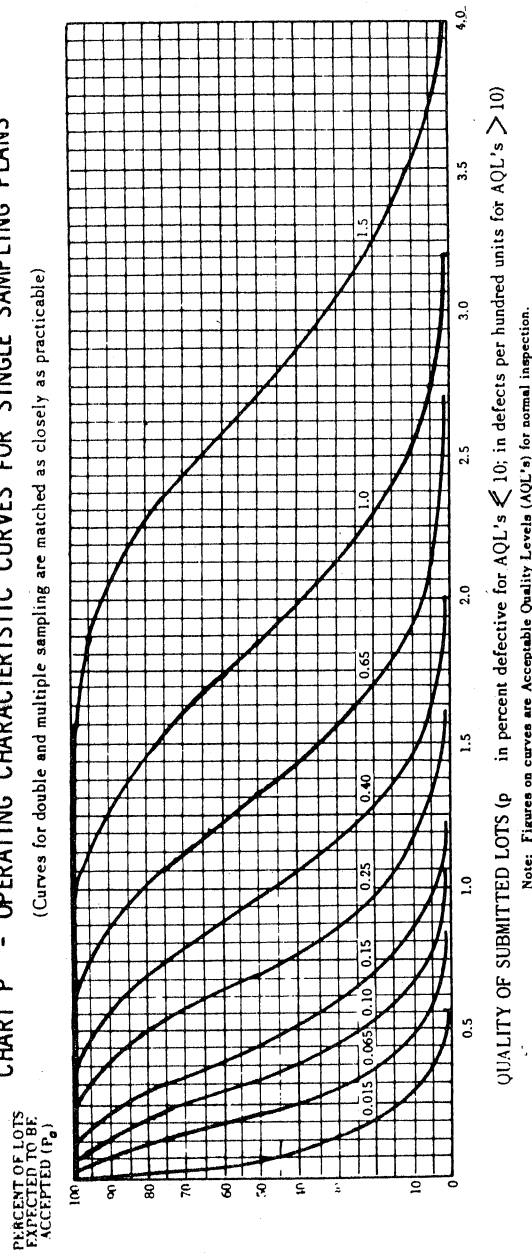


TABLE X-P-1 - TABULATED VALUES FOR OPERATING CHARACTERISTIC CURVES FOR SINGLE SAMPLING PLANS

P _a	Acceptable Quality Levels (normal inspection)											
	0.015	0.065	0.10	0.15	0.25	0.40	0.65	1.0	1.5			
	p(in percent defective or defects per hundred units)											
99.0	0.0013	0.0186	0.055	0.103	0.223	0.363	0.438	0.596	0.762	0.935	1.29	1.57
95.0	0.0064	0.0444	0.102	0.171	0.327	0.498	0.587	0.771	0.961	1.16	1.56	1.86
90.0	0.0131	0.0665	0.138	0.218	0.394	0.582	0.679	0.878	1.08	1.29	1.71	2.03
75.0	0.0360	0.120	0.216	0.317	0.527	0.745	0.855	1.08	1.30	1.53	1.99	2.34
50.0	0.0866	0.210	0.334	0.459	0.709	0.959	1.08	1.33	1.58	1.83	2.33	2.71
25.0	0.173	0.337	0.490	0.639	0.928	1.21	1.35	1.63	1.90	2.18	2.72	3.12
10.0	0.288	0.486	0.665	0.835	1.16	1.47	1.62	1.93	2.22	2.52	3.09	3.52
5.0	0.375	0.593	0.787	0.969	1.31	1.64	1.80	2.12	2.43	2.74	3.34	3.78
1.0	0.576	0.830	1.05	1.26	1.64	2.00	2.18	2.52	2.85	3.18	3.82	4.29
	0.025	0.10	0.15	0.25	0.40	0.65	1.0	1.5	2.33	3.12	4.29	5.0
	Acceptable Quality Levels (tightened inspection)											

Note: All values given in above table based on Poisson distribution as an approximation to the Binomial.

TABLE X-P-2 - SAMPLING PLANS FOR SAMPLE SIZE CODE LETTER: P

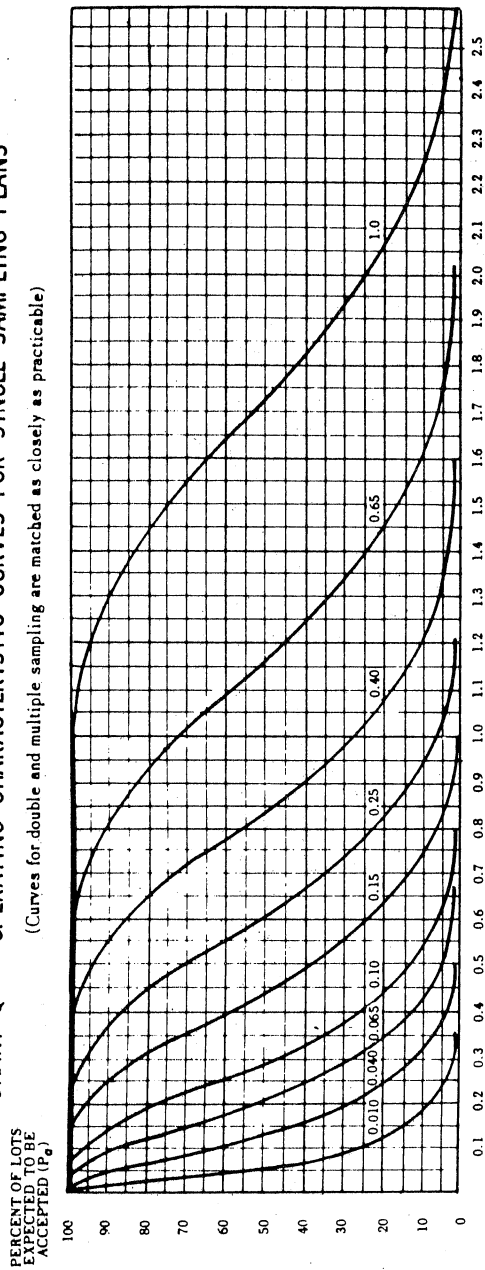
Type of sampling plan	Cumulative sample size	Acceptable Quality Levels (normal inspection)																				Cumulative sample size						
		0.010		0.015		0.025		0.040		0.065		0.10		0.15		0.25		0.40		0.65			1.0		1.5		Higher than 1.5	
		Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re		Ac	Re	Ac	Re	Ac	Re
Single	800	▽		0	1																							800
Double	500	▽		*																								500
	1000																										1000	
Multiple	200	▽		*																								200
	400																										400	
	600																										600	
	800																										800	
	1000																										1000	
	1200																										1200	
	1400																										1400	
	Less than 0.025			0.025																								

- △ = Use next preceding sample size code letter for which acceptance and rejection numbers are available.
 ▽ = Use next subsequent sample size code letter for which acceptance and rejection numbers are available.
 Ac = Acceptance number.
 Re = Rejection number.
 * = Use single sampling plan above.
 # = Acceptance not permitted at this sample size.

TABLE X-Q—Tables for sample size code letter: Q

CHART Q - OPERATING CHARACTERISTIC CURVES FOR SINGLE SAMPLING PLANS

(Curves for double and multiple sampling are matched as closely as practicable)



QUALITY OF SUBMITTED LOTS (p, in percent defective for AQL's ≤ 10 ; in defects per hundred units for AQL's > 10)

Note: Figures on curves are Acceptable Quality Levels (AQL's) for normal inspection

TABLE X-Q-1 - TABULATED VALUES FOR OPERATING CHARACTERISTIC CURVES FOR SINGLE SAMPLING PLANS

P _a	Acceptable Quality Levels (normal inspection)											
	0.010	0.040	0.065	0.10	0.15	0.25	0.40	0.65	1.0			
	p (in percent defective or defects per hundred units)											
99.0	0.00081	0.0119	0.0349	0.0656	0.143	0.232	0.281	0.382	0.488	0.598	0.828	1.01
95.0	0.00410	0.0284	0.0654	0.109	0.209	0.318	0.376	0.494	0.615	0.740	0.995	1.19
90.0	0.00840	0.0426	0.0882	0.140	0.252	0.372	0.435	0.562	0.692	0.824	1.09	1.30
75.0	0.0230	0.0769	0.138	0.203	0.338	0.476	0.547	0.690	0.834	0.979	1.27	1.49
50.0	0.0554	0.134	0.214	0.294	0.454	0.614	0.694	0.853	1.01	1.17	1.49	1.73
25.0	0.111	0.215	0.314	0.409	0.594	0.775	0.864	1.04	1.22	1.39	1.74	2.00
10.0	0.184	0.310	0.426	0.534	0.742	0.942	1.04	1.23	1.42	1.61	1.98	2.25
5.0	0.240	0.380	0.504	0.620	0.841	1.05	1.15	1.36	1.56	1.75	2.14	2.42
1.0	0.368	0.531	0.672	0.804	1.05	1.28	1.83	1.61	1.83	2.04	2.45	2.75
	0.015	0.065	0.10	0.15	0.25	0.40	0.65	1.0	1.0	1.0	1.0	1.0
	Acceptable Quality Levels (tightened inspection)											

Note: All values given in above table based on Poisson distribution as an approximation to the Binomial

TABLE X-Q-2 - SAMPLING PLANS FOR SAMPLE SIZE CODE LETTER: Q

Type of sampling plan	Cumulative sample size	Acceptable Quality Levels (normal inspection)																								Cumulative sample size																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																															
		X		0.010	0.015		X		0.025	0.040		0.065		0.10		0.15		0.25		X		0.40		X			0.65		X		1.0		Higher than 1.0																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																								
		Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re		Ac	Re	Ac	Re	Ac	Re																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																									
Single	1250	Use		0	1	Use		Use		Use		Use		Use		Use		Use		Use		Use		Use		Use		Use		Use		Use		Use		Use		Use		Use		Use		Use		Use		Use		Use		Use		Use		Use		Use		Use		Use		Use		Use		Use		Use		Use		Use		Use		Use		Use		Use		Use		Use		Use		Use		Use		Use		Use		Use		Use		Use		Use		Use		Use		Use		Use		Use		Use		Use		Use		Use		Use		Use		Use		Use		Use		Use		Use		Use		Use		Use		Use		Use		Use		Use		Use		Use		Use		Use		Use		Use		Use		Use		Use		Use		Use		Use		Use		Use		Use		Use		Use		Use		Use		Use		Use		Use		Use		Use		Use		Use		Use		Use		Use		Use		Use		Use		Use		Use		Use		Use		Use		Use		Use		Use		Use		Use		Use		Use		Use		Use		Use		Use		Use		Use		Use		Use		Use		Use		Use		Use		Use		Use		Use		Use		Use		Use		Use		Use		Use		Use		Use		Use		Use		Use		Use		Use		Use		Use		Use		Use		Use		Use		Use		Use		Use		Use		Use		Use		Use		Use		Use		Use		Use		Use		Use		Use		Use		Use		Use		Use		Use		Use		Use		Use		Use		Use		Use		Use		Use		Use		Use		Use		Use		Use		Use		Use		Use		Use		Use		Use		Use		Use		Use		Use		Use		Use		Use		Use		Use		Use		Use		Use		Use		Use		Use		Use		Use		Use		Use		Use		Use		Use		Use		Use		Use		Use		Use		Use		Use		Use		Use		Use		Use		Use		Use		Use		Use		Use		Use		Use		Use		Use		Use		Use		Use		Use		Use		Use		Use		Use		Use		Use		Use		Use		Use		Use		Use		Use		Use		Use		Use		Use		Use		Use		Use		Use		Use		Use		Use		Use		Use		Use		Use		Use		Use		Use		Use		Use		Use		Use		Use		Use		Use		Use		Use		Use		Use		Use		Use		Use		Use		Use		Use		Use		Use		Use		Use		Use		Use		Use		Use		Use		Use		Use		Use		Use		Use		Use		Use		Use		Use		Use		Use		Use		Use		Use		Use		Use		Use		Use		Use		Use		Use		Use		Use	

Δ = Use next preceding sample size code letter for which acceptance and rejection numbers are available.
 Ac = Acceptance number
 Re = Rejection number
 * = Use single sampling plan above.
 * = Acceptance not permitted at this sample size.

TABLE X-R—Tables for sample size code letter: R

CHART R - OPERATING CHARACTERISTIC CURVES FOR SINGLE SAMPLING PLANS

PERCENT OF LOTS
EXPECTED TO BE
ACCEPTED (P_a)

(Curves for double and multiple sampling are matched as closely as practicable)

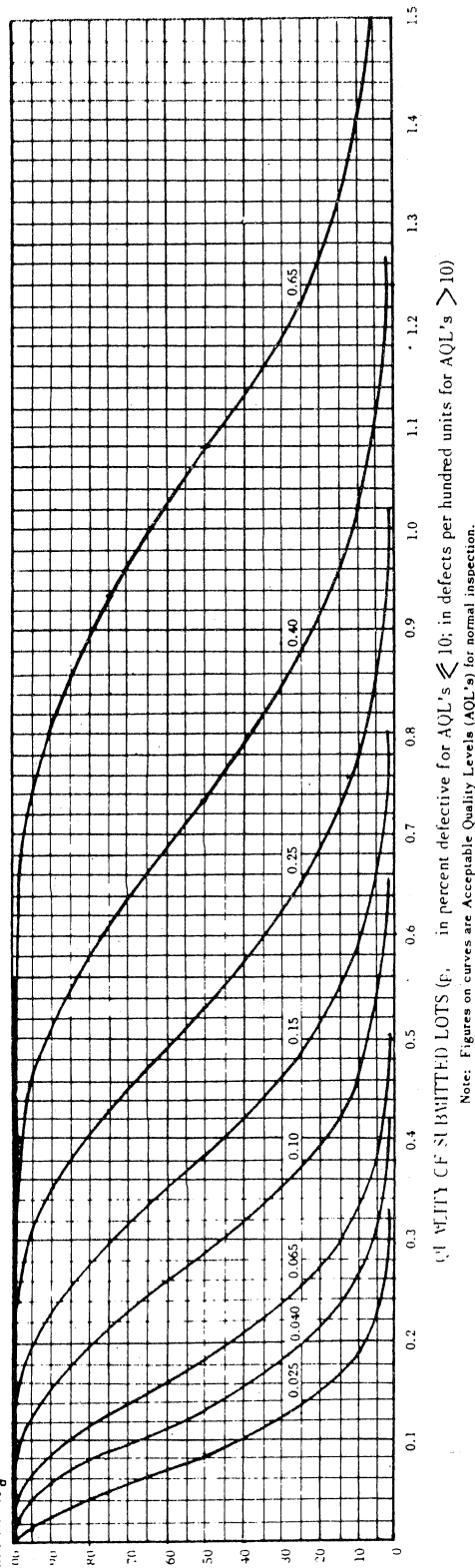


TABLE X-R-1 - TABULATED VALUES FOR OPERATING CHARACTERISTIC CURVES FOR SINGLE SAMPLING PLANS

P_a	Acceptable Quality Levels (normal inspection)									
	0.025	0.040	0.065	0.10	0.15	0.25	0.40	0.65	0.812	1.08
p (in percent defective or defects per hundred units)										
99.0	0.0074	0.0218	0.0412	0.0892	0.145	0.175	0.239	0.305	0.374	0.517
95.0	0.0178	0.0409	0.0683	0.131	0.199	0.235	0.309	0.385	0.462	0.622
90.0	0.0266	0.0551	0.0873	0.158	0.233	0.272	0.351	0.432	0.515	0.684
75.0	0.0481	0.0868	0.127	0.211	0.298	0.342	0.431	0.521	0.612	0.795
50.0	0.0839	0.134	0.184	0.284	0.384	0.433	0.533	0.633	0.733	0.933
25.0	0.135	0.196	0.256	0.371	0.484	0.540	0.651	0.761	0.870	1.09
10.0	0.195	0.266	0.334	0.404	0.589	0.650	0.770	0.889	1.01	1.24
5.0	0.237	0.315	0.388	0.526	0.657	0.722	0.848	0.972	1.09	1.33
1.0	0.332	0.420	0.502	0.655	0.800	0.870	1.02	1.14	1.27	1.53
	0.040	0.065	0.10	0.15	0.25	0.40	0.65	0.812	1.08	1.33
Acceptable Quality Levels (tightened inspection)										
	0.025	0.040	0.065	0.10	0.15	0.25	0.40	0.65	0.812	1.08

Note: All values given in above table based on Poisson distribution as an approximation to the Binomial.

TABLE X-R-2 - SAMPLING PLANS FOR SAMPLE SIZE CODE LETTER: R

Type of sampling plan	Cumulative sample size	Acceptable Quality Levels (normal inspection)																						Cumulative sample size																																																																																																																																																																																																																																																																																																																																																																																																																																																																					
		X	0.010		0.015		X		0.025		0.040		0.065		0.10		0.15		X		0.25		X		0.40		X		0.65		Higher than 0.65																																																																																																																																																																																																																																																																																																																																																																																																																																																														
			Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac		Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re																																																																																																																																																																																																																																																																																																																																																																																																																																																												
Single	2000	0	1																							2000																																																																																																																																																																																																																																																																																																																																																																																																																																																																			
Double	1250	•	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	

△ = Use next preceding sample size code letter for which acceptance and rejection numbers are available.

Ac = Acceptance number.

Re = Rejection number.

• = Use single sampling plan above.

, = Acceptance not permitted at this sample size.

TABLE X-S—Tables for sample size code letter: S

Type of sampling plan	Cumulative sample size	Acceptable Quality Level (normal inspection)	
		X	
		Ac	Re
Single	3150	1	2
Double	2000	0	2
	4000	1	2
Multiple	800	#	2
	1600	#	2
	2400	0	2
	3200	0	3
	4000	1	3
	4800	1	3
	5600	2	3
		0.025	
		Acceptable Quality Level (tightened inspection)	

Ac = Acceptance number
 Re = Rejection number
 # = Acceptance not permitted at this sample size.

Index of terms with special meanings

<i>Term</i>	<i>Paragraph</i>
Acceptable Quality Level (AQL)	4.2 and 11.1
Acceptance number	9.4 and 10.1.1
Attributes	1.4
Average Outgoing Quality (AOQ)	11.3
Average Outgoing Quality Limit (AOQL)	11.4
Average sample size	11.5
Batch	5.1
Classification of defects	2.1
Code letters	9.3
Critical defect	2.1.1
Critical defective	2.2.1
Defect	2.1
Defective unit	2.2
Defects per hundred units	3.3
Double sampling plan	10.1.2
Inspection	1.3
Inspection by attributes	1.4
Inspection level	9.2
Inspection lot or inspection batch	5.1
Isolated lot	11.6
Limiting Quality (LQ)	11.6
Lot	5.1
Lot or batch size	5.3
Major defect	2.1.2
Major defective	2.2.2
Minor defect	2.1.3
Minor defective	2.2.3
Multiple sampling plan	10.1.3
Normal inspection	8.1 and 8.2
Operating characteristic curve	11.1
Original inspection	11.2
Percent defective	3.2
Preferred AQLs	4.6
Process average	11.2
Reduced inspection	8.2 and 8.3.3
Rejection number	10.1.1
Responsible authority	1.1
Resubmitted lots or batches	6.4
Sample	7.1
Sample size	7.1
Sample size code letter	4.1 and 9.3
Sampling plan	9.5
Single sampling plan	10.1.1
Small-sample inspection	9.2
Switching procedures	8.3
Tightened inspection	8.2 and 8.3.1
Unit of product	1.5

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Philadelphia 20, Pennsylvania

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Army - Munitions Command